Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica Inc TARL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains 137 *Pages*

Report Nbr: 62283

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06843	S14-008	B2X7Y1	J4H120409-1	M4LQD1AA	9M4LQD10	4227042
		B2X7Y1	J4H120409-1	M4LQD1AC	9M4LQD10	4227040
		B2X7Y8	J4H120409-2	M4LQF1AA	9M4LQF10	4227044
		B2X7Y8	J4H120409-2	M4LQF1AC	9M4LQF10	4227042
		B2X7Y8	J4H120409-2	M4LQF1AD	9M4LQF10	4227040
		B2X7Y9	J4H120409-3	M4LQG1AA	9M4LQG10	4227044
		B2X7Y9	J4H120409-3	M4LQG1AC	9M4LQG10	4227042
		B2X7Y9	J4H120409-3	M4LQG1AD	9M4LQG10	4227040
		B2X811	J4H120409-4	M4LQJ1AA	9M4LQJ10	4227044
		B2X811	J4H120409-4	M4LQJ1AD	9M4LQJ10	4227047
		B2X811	J4H120409-4	M4LQJ1AE	9M4LQJ10	4227042
		B2X811	J4H120409-4	M4LQJ1AF	9M4LQJ10	4227040
		B2X811	J4H120409-4	M4LQJ3AC	9M4LQJ30	4245067
		B2X812	J4H120409-5	M4LQK1AA	9M4LQK10	4227044
		B2X812	J4H120409-5	M4LQK1AD	9M4LQK10	4227047

Comments:

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06843	S14-008	B2X812	J4H120409-5	M4LQK1AE	9M4LQK10	4227042
		B2X812	J4H120409-5	M4LQK1AF	9M4LQK10	4227040
		B2X812	J4H120409-5	M4LQK2AC	9M4LQK20	4245067
	I14-035	B2X605	J4H120419-1	M4LW71AA	9M4LW710	4224083
		B2X5X6	J4H130433-1	M4L791AA	9M4L7910	4225075
		B2X670	J4H130433-10	M4L8P1AA	9M4L8P10	4225075
	I14-035	B2X680	J4H130433-11	M4L8Q1AA	9M4L8Q10	4227044
		B2X680	J4H130433-11	M4L8Q1AC	9M4L8Q10	4227041
		B2X680	J4H130433-11	M4L8Q1AD	9M4L8Q10	4227048
		B2X680	J4H130433-11	M4L8Q1AE	9M4L8Q10	4227042
		B2X682	J4H130433-12	M4L8V1AA	9M4L8V10	4225075
		B2X610	J4H130433-2	M4L8A1AA	9M4L8A10	4227044
		B2X632	J4H130433-3	M4L8C1AA	9M4L8C10	4227044
		B2X632	J4H130433-3	M4L8C1AC	9M4L8C10	4227041
		B2X632	J4H130433-3	M4L8C1AD	9M4L8C10	4227045
		B2X632	J4H130433-3	M4L8C1AE	9M4L8C10	4227048
		B2X632	J4H130433-3	M4L8C1AF	9M4L8C10	4227042
		B2X634	J4H130433-4	M4L8D1AA	9M4L8D10	4225075
		B2X641	J4H130433-5	M4L8E1AA	9M4L8E10	4225075
		B2X656	J4H130433-6	M4L8G1AA	9M4L8G10	4227044
		B2X656	J4H130433-6	M4L8G1AC	9M4L8G10	4227041
		B2X656	J4H130433-6	M4L8G1AD	9M4L8G10	4227045
		B2X656	J4H130433-6	M4L8G1AE	9M4L8G10	4227048
		B2X656	J4H130433-6	M4L8G1AF	9M4L8G10	4227042
		B2X658	J4H130433-7	M4L8H1AA	9M4L8H10	4225075
		B2X663	J4H130433-8	M4L8J1AA	9M4L8J10	4227041

Comments:

Report Nbr: 62283

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06843	I14-035	B2X665	J4H130433-9	M4L8L1AA	9M4L8L10	4225075
	I14-036	B2X6J3	J4H140432-1	M4MMT1A	9M4MMT10	4227049
		B2X6M9	J4H140432-2	M4MMV1A	9M4MMV10	4227049
		B2X6N0	J4H140432-3	M4MMW1A	9M4MMW10	4227049
		B2X6M3	J4H140432-4	M4MMX1A	9M4MMX10	4227049
		B2X6M3	J4H140432-4	M4MMX1A	9M4MMX10	4227042
		B2X6M3	J4H140432-4	M4MMX1A	9M4MMX10	4227040
		B2X6M3	J4H140432-4	M4MMX2A	9M4MMX20	4248049

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop – R3-60
Richland, WA 99352

September 15, 2014

Attention: Scot Fitzgerald

SAF Number	:	I14-035, I14-036, S14-008
Date SDG Closed	:	August 13, 2014
Number of Samples	:	Twenty two (22)
Sample Type	:	Water
SDG Number	:	W06843
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between August 11, 2014 and August 13, 2014, twenty two water samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	DATE OF RECEIPT	MATRIX
B2X7Y1	M4LQD	8/11/14	WATER
B2X7Y8	M4LQF	8/11/14	WATER
B2X7Y9	M4LQG	8/11/14	WATER
B2X811	M4LQJ	8/11/14	WATER
B2X812	M4LQK	8/11/14	WATER
B2X605	M4LW7	8/12/14	WATER
B2X5X6	M4L79	8/13/14	WATER
B2X610	M4L8A	8/13/14	WATER
B2X632	M4L8C	8/13/14	WATER
B2X634	M4L8D	8/13/14	WATER
B2X641	M4L8E	8/13/14	WATER
B2X656	M4L8G	8/13/14	WATER

B2X658	M4L8H	8/13/14	WATER
B2X663	M4L8J	8/13/14	WATER
B2X665	M4L8L	8/13/14	WATER
B2X670	M4L8P	8/13/14	WATER
B2X680	M4L8Q	8/13/14	WATER
B2X682	M4L8V	8/13/14	WATER
B2X6J3	M4MMT	8/12/14	WATER
B2X6M9	M4MMV	8/12/14	WATER
B2X6N0	M4MMW	8/12/14	WATER
B2X6M3	M4MMX	8/12/14	WATER

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

During the monthly phone call on November 13, 2013 TARL was notified that all groundwater samples received will continue to have a 30 day turnaround time regardless if the chain of custodies have a turn around time that is greater than 30 days.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gas Proportional Counting
Gross Alpha by method RL-GPC-001
Gross Beta by method RL-GPC-001
Strontium-90 by method RL-GPC-003
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001
Iodine-129 (LL) by method RL-GAM-002
Liquid Scintillation Counting
Carbon-14 by method RL-LSC-008
Technetium-99 by TEVA method RL-LSC-014
Tritium by method RL-LSC-005
Laser Induced Phosphorimetry
Total Uranium by method RL-KPA-003
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample

(LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RL-GPC-001:
The MDA for samples B2X811 and B2X812 exceed the CRDL due to reduced aliquots based on weight screening results. Except as noted, the LCS, batch blank, samples and sample duplicate (B2X811) results are within contractual requirements.

Gross Beta by method RL-GPC-001:
The MDA for samples B2X811, B2X812 and B2X812 DUP exceeds the CRDL due reduced aliquots based on weight screening results. Except as noted, the LCS, batch blank, samples and sample duplicate (B2X812) results are within contractual requirements.

Strontium-90 by method RL-GPC-003:
The LCS, batch blank, samples and sample duplicate (B2X680) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001:
The LCS, batch blank, samples and sample duplicate (B2X632) results are within contractual requirements.

Iodine-129 (LL) by method RL-GAM-002:
The LCS, batch blank, samples and sample duplicate (B2X6J3) results are within contractual requirements.

Liquid Scintillation Counting

Carbon-14 by method RL-LSC-008:
The LCS, batch blank, samples and sample duplicate (B2X632) results are within contractual requirements.

Technetium-99 by TEVA method RL-LSC-014:
The LCS, batch blank, samples, sample duplicate (B2X7Y1) and sample matrix spike (B2X7Y1) results are within contractual requirements.

Tritium by method RL-LSC-005:
The initial batch, 4227044, duplicates were out of acceptance criteria. There were also spurious counts on the method blank, possibly due to electrostatic discharge. The count was recalculated however the MDA was above the CRDL. Batch 4248049 was a recount of the original batch, this batch had the duplicates in agreement and the blank was within acceptable limits. Except as noted, the LCS, batch blank, samples and sample duplicate (B2X6M3) results are within contractual requirements.

CH2M Hill Plateau Remediation Company
September 15, 2014

Total Uranium

Total Uranium by method RL-KPA-003:

The LCS, batch blank, samples, sample duplicate (B2X7Y1) and sample matrix spike (B2X7Y8) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

Batch 4225075:

The LCS, batch blank, samples, sample duplicate (B2X605) sample matrix spike (B2X605) and matrix spike duplicate (B2X605) results are within contractual requirements.

Batch 4224083:

The LCS, batch blank, samples, sample duplicate (B2X5X6) sample matrix spike (B2X5X6) and matrix spike duplicate (B2X5X6) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Whitney Ritari
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, ***u_c the combined uncertainty***. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2 + TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

9/15/2014 2:00:54 PM

TestAmerica Inc Report

* 906.0_H3_LSC wmz 9/16/14

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 62283 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4L8A10	B2X610		MW6-SBB-A1	I14-035	W06843					08/13/2014 09:46

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	2.86E+03	pCi/L	2.3E+02	2.6E+02		3.43E+02	100.0	~~TRITIUM_DIST_LS~~	5.029E-03	L	08/19/2014 01:22	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4L8C10	B2X632		MW6-SBB-A1	I14-035	W06843					08/13/2014 10:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	1.32E+03	pCi/L	1.9E+02	2.1E+02		3.42E+02	100.0	906.0_H3_LSC	5.017E-03	L	08/19/2014 02:45	I
4227041	C-14	14762-75-5	7.26E+02	pCi/L	2.0E+01	4.5E+01		1.75E+01	100.0	C14_LSC	7.51E-02	L	09/10/2014 08:32	I
4227045	CO-60	10198-40-0	2.43E-01	pCi/L	1.5E+00	1.5E+00	U	2.88E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	CS-134	13967-70-9	-1.45E+00	pCi/L	1.7E+00	1.7E+00	U	2.60E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	CS-137	10045-97-3	-4.71E-01	pCi/L	1.5E+00	1.5E+00	U	2.62E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	EU-152	14683-23-9	5.18E-02	pCi/L	3.9E+00	3.9E+00	U	6.97E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	EU-154	15585-10-1	2.95E+00	pCi/L	4.5E+00	4.5E+00	U	8.94E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	EU-155	14391-16-3	-8.82E-01	pCi/L	3.6E+00	3.6E+00	U	5.56E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	K-40	13966-00-2	-6.38E+01	pCi/L	4.3E+01	4.3E+01	U	8.86E+01		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227045	SB-125	14234-35-6	-1.71E+00	pCi/L	3.8E+00	3.8E+00	U	6.34E+00		GAMMA_GS	2.5042E+00	L	09/08/2014 19:01	I
4227048	Sr-89/90	SR-RAD	3.92E-02	pCi/L	1.8E-01	1.8E-01	U	4.22E-01	97.5	SRTOT_SEP_PRE	1.0004E+00	L	09/08/2014 22:19	I
4227042	Tc-99	14133-76-7	3.43E+01	pCi/L	5.1E+00	7.0E+00		9.62E+00	100.0	TC99_ETVDSK_LS	1.249E-01	L	08/27/2014 04:14	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4L8G10	B2X656		MW6-SBB-A1	I14-035	W06843					08/13/2014 08:40

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	5.23E+02	pCi/L	1.6E+02	1.7E+02		3.41E+02	100.0	906.0_H3_LSC	5.011E-03	L	08/19/2014 04:07	I
4227041	C-14	14762-75-5	9.77E+01	pCi/L	1.0E+01	1.3E+01		1.75E+01	100.0	C14_LSC	7.50E-02	L	09/10/2014 10:39	I
4227045	CO-60	10198-40-0	-3.87E-01	pCi/L	1.6E+00	1.6E+00	U	2.79E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227045	CS-134	13967-70-9	-1.18E+00	pCi/L	1.9E+00	1.9E+00	U	3.09E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227045	CS-137	10045-97-3	-8.79E-01	pCi/L	1.9E+00	1.9E+00	U	2.57E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227045	EU-152	14683-23-9	2.45E+00	pCi/L	3.9E+00	3.9E+00	U	6.98E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227045	EU-154	15585-10-1	7.05E-01	pCi/L	4.8E+00	4.8E+00	U	8.72E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227045	EU-155	14391-16-3	8.68E-01	pCi/L	3.6E+00	3.6E+00	U	6.29E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227045	K-40	13966-00-2	-4.16E+01	pCi/L	4.9E+01	4.9E+01	U	1.02E+02		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

4227045	SB-125	14234-35-6	-2.67E+00	pCi/L	3.6E+00	3.6E+00	U	6.05E+00		GAMMA_GS	2.5116E+00	L	09/08/2014 19:01	I
4227048	Sr-89/90	SR-RAD	-2.95E-02	pCi/L	1.8E-01	1.8E-01	U	4.37E-01	96.7	SRTOT_SEP_PRE	1.0007E+00	L	09/08/2014 22:19	I
4227042	Tc-99	14133-76-7	2.36E+01	pCi/L	4.7E+00	6.4E+00		9.51E+00	100.0	TC99_ETVDSK_LS	1.269E-01	L	08/27/2014 05:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4L8J10	B2X663		MW6-SBB-A1	I14-035	W06843					08/13/2014 08:23

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227041	C-14	14762-75-5	1.82E+03	pCi/L	3.0E+01	1.0E+02		1.76E+01	100.0	C14_LSC	7.50E-02	L	09/10/2014 11:42	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4L8Q10	B2X680		MW6-SBB-A1	I14-035	W06843					08/13/2014 11:13

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	1.36E+02	pCi/L	1.5E+02	1.6E+02	U	3.46E+02	100.0	906.0_H3_LSC	5.013E-03	L	08/19/2014 05:30	I
4227041	C-14	14762-75-5	3.46E+00	pCi/L	7.4E+00	8.7E+00	U	1.74E+01	100.0	C14_LSC	7.50E-02	L	09/10/2014 12:45	I
4227048	Sr-89/90	SR-RAD	1.42E-02	pCi/L	2.0E-01	2.0E-01	U	4.56E-01	100.0	SRTOT_SEP_PRE	1.0065E+00	L	09/08/2014 22:19	I
4227042	Tc-99	14133-76-7	-9.99E-01	pCi/L	3.9E+00	5.1E+00	U	9.63E+00	100.0	TC99_ETVDSK_LS	1.251E-01	L	08/27/2014 06:20	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQD10	B2X7Y1		MW6-SBB-A1	S14-008	W06843					08/11/2014 12:57

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227042	Tc-99	14133-76-7	1.32E+03	pCi/L	1.9E+01	7.7E+01		9.22E+00	100.0	TC99_ETVDSK_LS	1.309E-01	L	08/26/2014 20:55	I
4227040	Uranium	7440-61-1	1.54E+01	ug/L	1.8E+00	1.8E+00		8.25E-02		UTOT_KPA	2.54E+01	ML	09/09/2014 08:27	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQF10	B2X7Y8		MW6-SBB-A1	S14-008	W06843					08/11/2014 07:40

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	-7.45E+01	pCi/L	1.4E+02	1.5E+02	U	3.65E+02	100.0	906.0_H3_LSC	5.025E-03	L	08/18/2014 19:49	I
4227042	Tc-99	14133-76-7	2.12E-01	pCi/L	3.9E+00	5.1E+00	U	9.45E+00	100.0	TC99_ETVDSK_LS	1.273E-01	L	08/26/2014 21:57	I
4227040	Uranium	7440-61-1	8.63E-03	ug/L	1.3E-03	1.3E-03	U	7.59E-02		UTOT_KPA	2.76E+01	ML	09/09/2014 08:31	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQG10	B2X7Y9		MW6-SBB-A1	S14-008	W06843					08/11/2014 10:39

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	7.51E+03	pCi/L	3.3E+02	4.1E+02		3.47E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/18/2014 21:12	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

4227042	Tc-99	14133-76-7	1.13E+04	pCi/L	5.7E+01	6.2E+02		9.61E+00	100.0	TC99_ETVDSK_LS	1.259E-01	L	08/26/2014 23:00	I
4227040	Uranium	7440-61-1	8.79E+01	ug/L	1.1E+01	1.1E+01		7.68E-02		UTOT_KPA	2.73E+01	ML	09/09/2014 08:39	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQJ10	B2X811		MW6-SBB-A1	S14-008	W06843					08/11/2014 11:26

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	7.26E+03	pCi/L	3.3E+02	4.1E+02		3.47E+02	100.0	906.0_H3_LSC	5.006E-03	L	08/18/2014 22:35	I
4227047	Beta	12587-47-2	1.58E+03	pCi/L	2.1E+01	2.0E+02		5.08E+00	100.0	9310_ALPHABETA	8.72E-02	L	08/28/2014 08:15	I
4227042	Tc-99	14133-76-7	3.92E+03	pCi/L	3.4E+01	2.2E+02		9.51E+00	100.0	TC99_ETVDSK_LS	1.265E-01	L	08/27/2014 01:06	I
4227040	Uranium	7440-61-1	6.37E+01	ug/L	7.6E+00	7.6E+00		7.62E-02		UTOT_KPA	2.75E+01	ML	09/09/2014 08:41	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQJ30	B2X811		MW6-SBB-A1	S14-008	W06843					08/11/2014 11:26

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4245067	Alpha	12587-46-1	2.53E+01	pCi/L	4.6E+00	7.9E+00		4.06E+00	100.0	9310_ALPHABETA	5.21E-02	L	09/06/2014 18:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQK10	B2X812		MW6-SBB-A1	S14-008	W06843					08/11/2014 11:26

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227044	H-3	10028-17-8	7.25E+03	pCi/L	3.2E+02	4.1E+02		3.46E+02	100.0	906.0_H3_LSC	5.014E-03	L	08/18/2014 23:58	I
4227047	Beta	12587-47-2	1.17E+03	pCi/L	1.8E+01	1.5E+02		4.64E+00	100.0	9310_ALPHABETA	8.73E-02	L	08/28/2014 08:15	I
4227042	Tc-99	14133-76-7	3.94E+03	pCi/L	3.3E+01	2.2E+02		9.44E+00	100.0	TC99_ETVDSK_LS	1.277E-01	L	08/27/2014 03:11	I
4227040	Uranium	7440-61-1	6.42E+01	ug/L	7.7E+00	7.7E+00		6.99E-02		UTOT_KPA	3.00E+01	ML	09/09/2014 08:43	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4LQK20	B2X812		MW6-SBB-A1	S14-008	W06843					08/11/2014 11:26

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4245067	Alpha	12587-46-1	3.09E+01	pCi/L	5.4E+00	9.5E+00		4.72E+00	100.0	9310_ALPHABETA	5.28E-02	L	09/06/2014 18:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4MMT10	B2X6J3		MW6-SBB-A1	I14-036	W06843					08/12/2014 10:57

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227049	I-129	15046-84-1	6.27E-01	pCi/L	2.8E-01	2.8E-01		2.61E-01	93.0	I129LL_SEP_LEPS	3.8166E+00	L	09/05/2014 23:27	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 62283 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4MMV10	B2X6M9		MW6-SBB-A1	I14-036	W06843					08/12/2014 12:35

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227049	I-129	15046-84-1	1.43E+00	pCi/L	4.5E-01	4.5E-01		2.93E-01	90.8	I129LL_SEP_LEPS	3.8162E+00	L	09/06/2014 11:27	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4MMW1	B2X6N0		MW6-SBB-A1	I14-036	W06843					08/12/2014 12:35

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227049	I-129	15046-84-1	2.81E+00	pCi/L	5.5E-01	5.5E-01		3.19E-01	93.5	I129LL_SEP_LEPS	3.7984E+00	L	09/06/2014 13:43	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4MMX10	B2X6M3		MW6-SBB-A1	I14-036	W06843					08/12/2014 10:22

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4227049	I-129	15046-84-1	8.14E-01	pCi/L	2.7E-01	2.7E-01		2.67E-01	92.7	I129LL_SEP_LEPS	3.8044E+00	L	09/06/2014 13:44	I
4227042	Tc-99	14133-76-7	1.41E+02	pCi/L	7.5E+00	1.3E+01		9.67E+00	100.0	TC99_ETVDSK_LS	1.25E-01	L	08/27/2014 07:22	I
4227040	Uranium	7440-61-1	1.19E+02	ug/L	1.4E+01	1.4E+01		8.28E-02		UTOT_KPA	2.53E+01	ML	09/09/2014 08:52	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M4MMX20	B2X6M3		MW6-SBB-A1	I14-036	W06843					08/12/2014 10:22

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
4248049	H-3	10028-17-8	3.60E+02	pCi/L	1.5E+02	1.6E+02		3.17E+02	100.0	906.0_H3_LSC	5.007E-03	L	09/08/2014 18:17	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4MR12AB	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/12/2014 10:22
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 08/12/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BD	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4248049	H-3	-3.94E+01	pCi/L	1.5E+02	U	3.29E+02	100.0		906.0_H3_LSC	5.015E-03	09/08/2014				D
BLK	10028-17-8			1.3E+02						L	21:03				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id: M4MR21AB **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/13/2014 08:40

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BE	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227045	CO-60	1.02E+00	pCi/L	1.5E+00	U	3.02E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	10198-40-0			1.5E+00						L	23:49				
4227045	CS-134	9.17E-01	pCi/L	1.8E+00	U	3.18E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	13967-70-9			1.8E+00						L	23:49				
4227045	CS-137	-5.58E-01	pCi/L	1.4E+00	U	2.34E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	10045-97-3			1.4E+00						L	23:49				
4227045	EU-152	-1.29E+00	pCi/L	3.9E+00	U	6.74E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	14683-23-9			3.9E+00						L	23:49				
4227045	EU-154	2.46E+00	pCi/L	3.9E+00	U	7.96E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	15585-10-1			3.9E+00						L	23:49				
4227045	EU-155	-1.50E+00	pCi/L	3.5E+00	U	5.33E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	14391-16-3			3.5E+00						L	23:49				
4227045	K-40	-1.04E+02	pCi/L	4.2E+01	U	8.12E+01			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	13966-00-2			4.2E+01						L	23:49				
4227045	SB-125	1.95E+00	pCi/L	3.5E+00	U	6.48E+00			GAMMA_GS	2.5448E+00	09/08/2014				D
BLK	14234-35-6			3.5E+00						L	23:49				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR41AB **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 11:26

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BG	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227047	Beta	1.17E+00	pCi/L	1.0E+00	U	1.83E+00	100.0		9310_ALPHAB	2.017E-01	08/28/2014				D
BLK	12587-47-2			1.0E+00						L	08:15				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4MR51AB	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/13/2014 11:13
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**BLK**		**Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BI	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227048	Sr-89/90	8.68E-02	pCi/L	2.0E-01	U	4.49E-01	91.7		SRTOT_SEP_	1.0053E+00	09/08/2014				D
BLK	SR-RAD			2.0E-01						L	22:19				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR61AB **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/12/2014 10:57

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 08/12/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BK	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227049	I-129	-9.21E-02	pCi/L	2.2E-01	U	3.11E-01	93.8		I129LL_SEP_L	3.5707E+00	09/06/2014				D
BLK	15046-84-1			2.2E-01						L	16:31				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4MRM1AB	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/11/2014 12:57
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**BLK**		**Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BM	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227040	Uranium	2.33E-02	ug/L	2.9E-03	U	7.91E-02			UTOT_KPA	2.65E+01	09/09/2014				D
BLK	7440-61-1			2.9E-03						ML	09:01				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MRQ1AB **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/13/2014 10:45

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BP	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227041	C-14	5.35E+00	pCi/L	8.8E+00	U	1.75E+01	100.0		C14_LSC	7.50E-02	09/10/2014				D
BLK	14762-75-5			7.5E+00						L	13:49				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MRW1AB **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 10:39

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BR	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227042	Tc-99	1.19E+00	pCi/L	5.1E+00	U	9.41E+00	100.0		TC99_ETVDSK	1.275E-01	08/27/2014				D
BLK	14133-76-7			3.9E+00						L	09:27				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4T761AB
Client Id: NA
Moisture/Solids%*:

Sdg/Rept Nbr: W06843 62283
Matrix: WATER WATER
QC Type: BLK

Collection Date: 08/11/2014 11:26
Sample On Date:
Received Date: 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BT	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4245067	Alpha	-3.36E-02	pCi/L	3.6E-01	U	7.02E-01	100.0		9310_ALPHAB	2.013E-01	09/06/2014				D
BLK	12587-46-1			3.6E-01						L	18:17				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR11CS
Client Id: NA
Moisture/Solids%*:

Sdg/Rept Nbr: W06843 62283
Matrix: WATER WATER
QC Type: BS

Collection Date: 08/12/2014 10:22
Sample On Date:
Received Date: 08/12/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BC	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227044	H-3	2.69E+03	pCi/L	2.6E+02		3.59E+02	100.0	2.70E+03	906.0_H3_LSC	5.002E-03	08/19/2014			70	D
BS	10028-17-8			2.3E+02				99.5		L	12:25			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR21CS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/13/2014 08:40

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BF	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227045	CO-60	3.49E+01	pCi/L	7.5E+00		3.52E+00		3.16E+01	GAMMA_GS	2.5018E+00	09/08/2014			70	D
BS	10198-40-0			7.5E+00				110.2		L	23:49			130	
4227045	CS-137	3.44E+01	pCi/L	6.5E+00		3.77E+00		3.99E+01	GAMMA_GS	2.5018E+00	09/08/2014			70	D
BS	10045-97-3			6.5E+00				86.2		L	23:49			130	
4227045	EU-152	7.43E+01	pCi/L	1.5E+01		8.85E+00		6.13E+01	GAMMA_GS	2.5018E+00	09/08/2014			70	D
BS	14683-23-9			1.5E+01				121.2		L	23:49			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR41CS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 11:26

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BH	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227047	Beta	1.80E+01	pCi/L	2.9E+00		1.95E+00	100.0	2.23E+01	9310_ALPHAB	2.019E-01	08/28/2014			70	D
BS	12587-47-2			1.7E+00				80.7		L	11:47			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR51CS
Client Id: NA
Moisture/Solids%*:

Sdg/Rept Nbr: W06843 62283
Matrix: WATER WATER
QC Type: BS

Collection Date: 08/13/2014 11:13
Sample On Date:
Received Date: 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BJ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227048	Sr-89/90	7.27E+00	pCi/L	1.8E+00		4.69E-01	94.2	6.83E+00	SRTOT_SEP_	1.0007E+00	09/08/2014			70	D
BS	SR-RAD			6.3E-01				106.5		L	22:19			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MR61CS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/12/2014 10:57

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/12/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BL	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227049	I-129	9.85E+00	pCi/L	1.2E+00		3.72E-01	94.9	1.08E+01	I129LL_SEP_L	3.6116E+00	09/06/2014			70	D
BS	15046-84-1			1.2E+00				90.9		L	16:31			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MRM1CS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 12:57

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BN	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227040	Uranium	3.27E+01	ug/L	3.9E+00		7.57E-02		3.33E+01	UTOT_KPA	2.77E+01	09/09/2014			70	D
BS	7440-61-1			3.9E+00				98.2		ML	09:03			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4MRM1DS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 12:57

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BO	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227040	Uranium	3.49E+00	ug/L	3.6E-01		8.15E-02		3.52E+00	UTOT_KPA	2.57E+01	09/09/2014			70	D
BS	7440-61-1			3.6E-01				99.3		ML	09:05			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4MRQ1CS	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/13/2014 10:45
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BQ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227041	C-14	4.88E+02	pCi/L	3.3E+01		1.74E+01	100.0	4.91E+02	C14_LSC	7.50E-02	09/10/2014			70	D
BS	14762-75-5			1.7E+01				99.4		L	14:52			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id: M4MRW1CS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 10:39

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BS	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227042	Tc-99	5.73E+02	pCi/L	3.6E+01		9.35E+00	100.0	5.43E+02	TC99_ETVDSK	1.282E-01	08/27/2014			70	D
BS	14133-76-7			1.3E+01				105.4		L	10:29			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Lab Sample Id: M4T761CS **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 11:26

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BU	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4245067	Alpha	2.06E+01	pCi/L	5.4E+00		7.84E-01	100.0	2.34E+01	9310_ALPHAB	2.014E-01	09/06/2014			70	D
BS	12587-46-1			1.6E+00				88.1		L	18:17			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4L8C1GR	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/13/2014 10:45
Client Id:	B2X632	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I14-035	MW6-SBB-A19981								AR	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227041	C-14	7.49E+02	pCi/L	4.7E+01		1.75E+01	100.0		C14_LSC	7.50E-02	09/10/2014	3.2	0.7		D
DUP	14762-75-5	7.26E+02		2.0E+01						L	09:35	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id: M4L8G1GR **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/13/2014 08:40

Client Id: B2X656 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I14-035	MW6-SBB-A19981								AS	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227045	CO-60	-3.06E-01	pCi/L	1.7E+00	U	2.97E+00			GAMMA_GS	2.5116E+00	09/08/2014	0.0	0.1		D
DUP	10198-40-0	-3.87E-01		1.7E+00						L	23:47	20.0	3		
4227045	CS-134	-1.80E+00	pCi/L	1.7E+00	U	2.79E+00			GAMMA_GS	2.5116E+00	09/08/2014	0.0	0.5		D
DUP	13967-70-9	-1.18E+00		1.7E+00						L	23:47	20.0	3		
4227045	CS-137	4.54E-01	pCi/L	1.4E+00	U	2.64E+00			GAMMA_GS	2.5116E+00	09/08/2014	0.0	1.3		D
DUP	10045-97-3	-8.79E-01		1.4E+00						L	23:47	20.0	3		
4227045	EU-152	-1.78E+00	pCi/L	4.1E+00	U	6.86E+00			GAMMA_GS	2.5116E+00	09/08/2014	1272.6	1.5		D
DUP	14683-23-9	2.45E+00		4.1E+00						L	23:47	20.0	3		
4227045	EU-154	-1.91E-01	pCi/L	3.7E+00	U	6.84E+00			GAMMA_GS	2.5116E+00	09/08/2014	348.8	0.3		D
DUP	15585-10-1	7.05E-01		3.7E+00						L	23:47	20.0	3		
4227045	EU-155	-2.51E+00	pCi/L	3.6E+00	U	5.95E+00			GAMMA_GS	2.5116E+00	09/08/2014	0.0	1.3		D
DUP	14391-16-3	8.68E-01		3.6E+00						L	23:47	20.0	3		
4227045	K-40	-3.10E+00	pCi/L	2.0E+01	U	3.85E+01			GAMMA_GS	2.5116E+00	09/08/2014	0.0	2.7		D
DUP	13966-00-2	-4.16E+01		2.0E+01						L	23:47	20.0	3		
4227045	SB-125	-1.57E+00	pCi/L	4.2E+00	U	7.13E+00			GAMMA_GS	2.5116E+00	09/08/2014	0.0	0.4		D
DUP	14234-35-6	-2.67E+00		4.2E+00						L	23:47	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4L8Q1FR	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/13/2014 11:13
Client Id:	B2X680	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/13/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I14-035	MW6-SBB-A19981								AT	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227048	Sr-89/90	-1.62E-01	pCi/L	1.6E-01	U	4.17E-01	100.0		SRTOT_SEP_	1.008E+00	09/08/2014	0.0	1.6		D
DUP	SR-RAD	1.42E-02		1.5E-01						L	22:19	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id: M4LQD1DR **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 12:57

Client Id: B2X7Y1 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S14-008	MW6-SBB-A19981								AU	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227040	Uranium	1.55E+01	ug/L	1.8E+00		7.48E-02			UTOT_KPA	2.80E+01	09/09/2014	.4	0.1		D
DUP	7440-61-1	1.54E+01		1.8E+00						ML	08:29	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4LQG1ER	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/11/2014 10:39
Client Id:	B2X7Y9	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S14-008	MW6-SBB-A19981								AW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227042	Tc-99	1.12E+04	pCi/L	6.1E+02		9.67E+00	100.0		TC99_ETVDSK	1.252E-01	08/27/2014	.6	0.2		D
DUP	14133-76-7	1.13E+04		5.7E+01						L	00:03	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id: M4LQJ3HR **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 11:26

Client Id: B2X811 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S14-008	MW6-SBB-A19981								AY	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4245067	Alpha	2.35E+01	pCi/L	7.6E+00		4.92E+00	100.0		9310_ALPHAB	5.00E-02	09/06/2014	7.2	0.3		D
DUP	12587-46-1	2.53E+01		4.9E+00						L	18:17	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4LQK1GR	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/11/2014 11:26
Client Id:	B2X812	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S14-008	MW6-SBB-A19981								AZ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227047	Beta	1.01E+03	pCi/L	1.3E+02		4.64E+00	100.0		9310_ALPHAB	9.08E-02	08/28/2014	14.6	1.7		D
DUP	12587-47-2	1.17E+03		1.6E+01						L	08:15	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4MMT1CR	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/12/2014 10:57
Client Id:	B2X6J3	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/12/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I14-036	MW6-SBB-A19981								BA	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227049	I-129	6.86E-01	pCi/L	3.3E-01		3.25E-01	93.5		I129LL_SEP_L	3.8368E+00	09/06/2014	9.0	0.3		D
DUP	15046-84-1	6.27E-01		3.3E-01						L	11:26	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4MMX2FR	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/12/2014 10:22
Client Id:	B2X6M3	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/12/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I14-036	MW6-SBB-A19981								BB	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4248049	H-3	4.37E+02	pCi/L	1.7E+02		3.14E+02	100.0		906.0_H3_LSC	5.021E-03	09/08/2014	19.2	0.7		D
DUP	10028-17-8	3.60E+02		1.5E+02						L	19:40	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id:	M4LQF1EW	**Sdg/Rept Nbr:**	W06843	62283	**Collection Date:** 08/11/2014 07:40
Client Id:	B2X7Y8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	MS		**Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S14-008	MW6-SBB-A19981								AV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227040	Uranium	3.04E+01	ug/L	3.6E+00		7.03E-02		3.09E+01	UTOT_KPA	2.98E+01	09/09/2014			70	D
MS	7440-61-1			3.6E+00				98.4		ML	08:36			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica Inc Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed

Lab Sample Id: M4LQJ1GW **Sdg/Rept Nbr:** W06843 62283 **Collection Date:** 08/11/2014 11:26

Client Id: B2X811 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** MS **Received Date:** 08/11/2014

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S14-008	MW6-SBB-A19981								AX	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
4227042	Tc-99	3.30E+03	pCi/L	4.5E+02		9.44E+00	100.0	3.56E+03	TC99_ETVDSK	1.273E-01	08/27/2014			60	D
MS	14133-76-7			4.5E+01				92.6		L	02:08			140	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

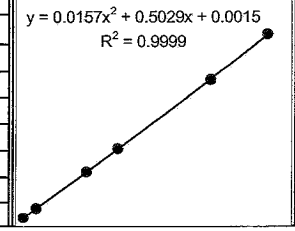
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Hexavalent Chromium - Water

Analyst:	I. Salifu
Start Date:	8/13/2014
Start Time:	16:20
End Date:	8/13/2014
End Time	17:18
Analyst Signature:	
Date:	08/13/14

Calibration Curve Information

	Amount (mL)	Conc.(mg/L)	ABS.
Blank	0.000	0.000	0.000
Std. 1	0.100	0.050	0.097
Std. 2	0.500	0.250	0.482
Std. 3	0.750	0.375	0.722
Std. 4	1.500	0.750	1.435
Std 5	2.000	1.000	1.871
Standard Volume (mL):			100.000
Date of Curve:			8/13/2014



R Squared	0.9999
2nd°Coeff (a)	0.0157
1st°Coeff (b)	0.5029
Constant (c)	0.0015
Intercept	-0.0030
MDL (mg/L)	0.008

BATCH #	4225075
SDG #	W06843
Matrix	Water
SOP Information	RL-WC-003 Revision 6
Instrument Information	
Instrument:	Hach DR2010
Wavelength:	540

	Calibration Information:	ICV/CCV Information:	LCS Information:	Matrix Spike Information:
Dilution ID #	Cr-14-00313	Cr-14-00314	Cr-14-00313	Cr-14-00313
Prep Date:	08/13/14	08/13/14	08/13/14	08/13/14
Concentration (mg/L)	50	50	50	50
Expiration Date:	08/14/14	08/14/14	08/14/14	08/14/14
Pipettor(s)	201,282,286	286	286	282
Volume Used (mL)		1.000	1.00	1.50
Final Volume (mL)		100.000	100.00	100.00
Expected Value (mg/L)		0.500	0.500	0.750

Sample ID	Client ID	Type	Final Volume (mL)	Sample ABS.	Color Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Expected (mg/L)	% Rec. / RPD	Final Reported Conc. (mg/L)	Qualifier
n/a	n/a	ICV	100.000	0.955		0.955	1	0.4961	0.5000	99.22%	0.496	
n/a	n/a	ICB	100.000	0.001		0.001	1	0.0020			<MDL	U
n/a	n/a	CCV	100.000	0.928		0.928	1	0.4817	0.5000	96.34%	0.482	
n/a	n/a	CCB	100.000	0.001		0.001	1	0.0020			<MDL	U
M4L9J1AA	n/a	BLK	100.000	0.001		0.001	1	0.0020			<MDL	U
M4L9J1AC	n/a	LCS	100.000	0.948		0.948	1	0.4924	0.5000	98.47%	0.492	
M4L791AA	B2X5X6'	Sample	100.000	0.007		0.007	1	0.0050			<MDL	U
M4L791AC	B2X5X6'	MS*	100.000	1.510		1.510	1	0.7967	0.7500	106.22%	0.797	
M4L791AD	B2X5X6'	MSD*	100.000	1.491		1.491	1	0.7862	0.7500	104.83%	0.786	
M4L791AE	B2X5X6 DUP'	Duplicate	100.000	0.007		0.007	1	0.0050			<MDL	U
M4L8D1AA	B2X634'	Sample	100.000	0.027		0.027	1	0.0151			0.015	
M4L8E1AA	B2X641'	Sample	100.000	0.012		0.012	1	0.0075			<MDL	U
M4L8H1AA	B2X658'	Sample	100.000	0.046		0.046	1	0.0247			0.025	
M4L8L1AA	B2X665'	Sample	100.000	0.021		0.021	1	0.0121			0.012	
n/a	n/a	CCV	100.000	0.927		0.927	1	0.4812	0.5000	96.24%	0.481	
n/a	n/a	CCB	100.000	0.001		0.001	1	0.0020			<MDL	U

HR

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample.

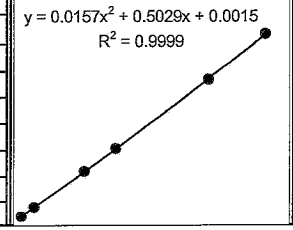
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Hexavalent Chromium - Water

Analyst:	I. Salifu
Start Date:	8/13/2014
Start Time:	16:20
End Date:	8/13/2014
End Time	17:18
Analyst Signature:	
Date:	08/13/14

Calibration Curve Information

	Amount (mL)	Conc.(mg/L)	ABS.
Blank	0.000	0.000	0.000
Std. 1	0.100	0.050	0.097
Std. 2	0.500	0.250	0.482
Std. 3	0.750	0.375	0.722
Std. 4	1.500	0.750	1.435
Std 5	2.000	1.000	1.871
Standard Volume (mL):			100.000
Date of Curve:			8/13/2014



R Squared	0.9999
2nd°Coeff (a)	0.0157
1st°Coeff (b)	0.5029
Constant (c)	0.0015
Intercept	-0.0030
MDL (mg/L)	0.008

BATCH #	4225075
SDG #	W06843
Matrix	Water
SOP Information	RL-WC-003 Revision 6
Instrument Information	
Instrument:	Hach DR2010
Wavelength:	540

	Calibration Information:	ICV/CCV Information:	LCS Information:	Matrix Spike Information:
Dilution ID #	Cr-14-00313	Cr-14-00314	Cr-14-00313	Cr-14-00313
Prep Date:	08/13/14	08/13/14	08/13/14	08/13/14
Concentration (mg/L)	50	50	50	50
Expiration Date:	08/14/14	08/14/14	08/14/14	08/14/14
Pipettor(s)	201,282,286	286	286	282
Volume Used (mL)		1.000	1.00	1.50
Final Volume (mL)		100.000	100.00	100.00
Expected Value (mg/L)		0.500	0.500	0.750

M4L8P1AA	B2X670'	Sample	100.000	0.025		0.025	1	0.0141			0.014	
M4L8V1AA	B2X682'	Sample	100.000	0.015		0.015	1	0.0090			0.009	
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
n/a	n/a	CCV	100.000	0.929		0.929	1	0.4822	0.5000	96.45%	0.482	
n/a	n/a	CCB	100.000	0.002		0.002	1	0.0025			<MDL	U
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
n/a		CCV	100.000				1					
n/a		CCB	100.000				1					

HRL

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample.

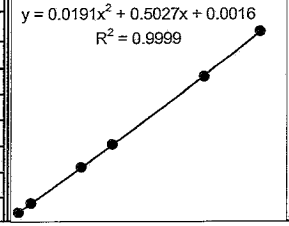
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Hexavalent Chromium - Water

Analyst:	I.Salifu
Start Date:	8/12/2014
Start Time:	15:20
End Date:	8/12/2014
End Time	16:30
Analyst Signature:	
Date:	08/12/14

Calibration Curve Information

	Amount (mL)	Conc.(mg/L)	ABS.
Blank	0.000	0.000	0.000
Std. 1	0.100	0.050	0.096
Std. 2	0.500	0.250	0.481
Std. 3	0.750	0.375	0.719
Std. 4	1.500	0.750	1.422
Std 5	2.000	1.000	1.851
Standard Volume (mL):			100.000
Date of Curve:			8/12/2014



R Squared	0.9999
2nd°Coeff (a)	0.0191
1st°Coeff (b)	0.5027
Constant (c)	0.0016
Intercept	-0.0032
MDL (mg/L)	0.008

BATCH #	4224083
SDG #	W06843
Matrix	Water
SOP Information	RL-WC-003 Revision 6
Instrument Information	
Instrument:	Hach DR2010
Wavelength:	540

	Calibration Information:	ICV/CCV Information:	LCS Information:	Matrix Spike Information:
Dilution ID #	Cr-14-00311	Cr-14-00312	Cr-14-00311	Cr-14-00311
Prep Date:	08/12/14	08/12/14	08/12/14	08/12/14
Concentration (mg/L)	50	50	50	50
Expiration Date:	08/13/14	08/13/14	08/13/14	08/13/14
Pipettor(s)	201,282,286	286	286	282
Volume Used (mL)		1.000	1.00	1.50
Final Volume (mL)		100.000	100.00	100.00
Expected Value (mg/L)		0.500	0.500	0.750

Sample ID	Client ID	Type	Final Volume (mL)	Sample ABS.	Color Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Expected (mg/L)	% Rec. / RPD	Final Reported Conc. (mg/L)	Qualifier
n/a	n/a	ICV	100.000	0.949		0.949	1	0.4959	0.5000	99.17%	0.496	
n/a	n/a	ICB	100.000	0.001		0.001	1	0.0021			<MDL	U
n/a	n/a	CCV	100.000	0.887		0.887	1	0.4625	0.5000	92.50%	0.463	
n/a	n/a	CCB	100.000	0.001		0.001	1	0.0021			<MDL	U
M4LXD1AA	n/a	BLK	100.000	0.002		0.002	1	0.0026			<MDL	U
M4LXD1AC	n/a	LCS	100.000	0.945		0.945	1	0.4937	0.5000	98.74%	0.494	
M4LW71AA	B2X605'	Sample	100.000	0.004		0.004	1	0.0036			<MDL	U
M4LW71AC	B2X605'	MS*	100.000	1.506		1.506	1	0.8020	0.7500	106.93%	0.802	
M4LW71AD	B2X605'	MSD*	100.000	1.502		1.502	1	0.7997	0.7500	106.63%	0.800	
M4LW71AE	B2X605 DUP'	Duplicate	100.000	0.005		0.005	1	0.0041			<MDL	U
			100.000				1					
			100.000				1					
			100.000				1					
			100.000				1					
n/a	n/a	CCV	100.000	0.884		0.884	1	0.4609	0.5000	92.18%	0.461	
n/a	n/a	CCB	100.000	0.002		0.002	1	0.0026			<MDL	U

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample.

September 16, 2014

HRJ

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
September 16, 2014
RADIOCHEMISTRY, First Level Review

9/8/2014 11:14:16 AM

Lot No., Due Date: J4H120409; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4245067; RALPHA-A Alpha by GPC-Am
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?		✓	
3.5 Are the sample yields and MDAs within contract limits?		✓	
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
NCM 10-28558

First Level _____ **Date** 9/8/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 424506?

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?		✓	
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?	✓		✓ 9/8/14
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

10-28558 < 3pci/L

dup out, reanalyze

Second Level Review: [signature] Date: 9/8/14

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-28558**
NCM Initiated By: Tom Mcginnis
Date Opened: 09/08/2014
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Environmental - Sep
Tests: Alpha by GPC-Am
Lot #'s (Sample #'s): J4H120409 (4,5), J4I020000 (67),
QC Batches: 4245067,

Nonconformance: Batch Result Out of Limits
Subcategory: MDA exceeds RDL

WQ0843

Problem Description / Root Cause

Name	Date	Description
Tom Mcginnis	09/08/2014	The duplicate agreement for the initial analysis batch 4227046 exceeded acceptance criteria. Reanalysis batch 4245067 was performed. The MDA for the samples and associated QC in batch 4245067 exceeds the CRDL due to aliquot reduction based on weight screening results. The sample results are greater than the MDA.

Corrective Action

Name	Date	Corrective Action
Tom Mcginnis	09/08/2014	The PM was notified of the batch deficiencies.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 9/8/2014

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

Lot No., Due Date: J4H120409; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227047; RBETA-SR Beta by GPC-Sr/Y
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?		✓	
3.5 Are the sample yields and MDAs within contract limits?		✓	
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
NCM 10-28512

First Level _____ Date 9/3/14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

September 16, 2014

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 4227047

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?		✓	
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?	✓		
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response: See NCM 10-28512

Second Level Review: Candace Legen Date: 9-4-14

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-28512**
NCM Initiated By: Tom Mcginnis
Date Opened: 09/03/2014
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Environmental - Sep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J4H120409 (4,5), J4H150000 (47),
QC Batches: 4227047,

Nonconformance: Batch Result Out of Limits
Subcategory: MDA exceeds RDL

Problem Description / Root Cause

Name	Date	Description
Tom Mcginnis	09/03/2014	The MDA for the samples and associated QC in batch 4227047 exceeds the CRDL due to aliquot reduction based on weight screening results. The sample results are greater than the MDA. All other batch results meet acceptance criteria.

Corrective Action

Name	Date	Corrective Action
Tom Mcginnis	09/03/2014	The PM was notified of the batch deficiencies.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 9/3/2014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Verification Checklist
RADIOCHEMISTRY, First Level Review

September 16, 2014

9/9/2014 2:15:34 PM

Lot No., Due Date: J4H130433; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227048; RSRTOT SrTot by GPC
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level _____ **Date** 9/9/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 4227048

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

SR 2pCi/L

Second Level Review: Robert E. Mays Date: 9/10/14

DR-001, Rev. 01, 10/30/2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
September 16, 2014
RADIOCHEMISTRY, First Level Review

9/11/2014 3:59:54 PM

Lot No., Due Date: J4H130433; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227045; RGAMMA Gamma by GER
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level [signature] **Date** 9/11/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 4227045

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

Y Eu 50 pCi/L
Cs 15
Sb 50
Co 25

Second Level Review: Rob Ethridge Date: 9/12/14

DR-001, Rev. 01, 10/30/2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
September 15, 2014
RADIOCHEMISTRY, First Level Review

9/11/2014 3:43:25 PM

Lot No., Due Date: J4H140432; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227049; RGAMLEPS Gamma by LEPS
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level _____ **Date** 9/11/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 4227049

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

I-129 Spcl/L

Second Level Review: [signature] Date: 9/12/14

DR-001, Rev. 01, 10/30/2013

Lot No., Due Date: J4H130433; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227041; RC14 C-14 by LSC
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Lee Anderson **Date** 9/12/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 4227041

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

C14 200pCi/L

Second Level Review: Rob-E Mays Date: 9/12/14

Lot No., Due Date: J4H130433,J4H120409,J4H140432; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227042; RTC99 Tc-99 by LSC
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	✓		
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level [signature] **Date** 9/3/14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 4227042

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?	✓		
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

Tc99 15pCi/L

Second Level Review: [signature]   Date: 9/4/14

DR-001, Rev. 01, 10/30/2013

Lot No., Due Date: J4H140432; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4248049; RTRITIUM H-3 by LSC
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?			✓
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
NCM 10-28585

First Level Randhagel **Date** 9/09/2014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 4248049

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?			✓
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			✓
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		~~✓~~ [initials] 9/9/14
C. Other 1. Are all Nonconformances (NCM) included and noted?	✓		
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:
10-28585 H3 400pCi/L

Second Level Review: [signature] Date: 9/9/14

DR-001, Rev. 01, 10/30/2013

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-28585**
NCM Initiated By: Sarah Nagel
Date Opened: 09/09/2014
Date Closed: 09/09/2014

Classification: **Anomaly**
Status: **CLOSED**
Production Area: Counting
Tests: H-3 by LSC
Lot #'s (Sample #'s): J4H120409 (2,3,4,5), J4H130433 (11,2,3,6), J4H140432 (4), J4H150000 (44),
QC Batches: 4227044, 4248049,

Nonconformance: QC data exceeded criteria
Subcategory: Duplicate precision out of control

WO60843

Problem Description / Root Cause

Name	Date	Description
Sarah Nagel	09/09/2014	In batch 4227044 the duplicate agreement was outside acceptance criteria. The sample and duplicate were recounted in batch 4248049 with the duplicate agrrement meeting acceptance criteria. In batch 4227044 there were spurious counts (12.05, 7.95, 7.25, 8.6) on the method blank possibly due to electrostatic discharge. The count was removed and the data recalculated however the MDA was above CRDL. The blank was recounted in batch 4248049 with acceptable results.

Corrective Action

Name	Date	Corrective Action
Sarah Nagel	09/09/2014	The samples were recounted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Lot No., Due Date: J4H130433,J4H120409,J4H140432; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227044; RTRITIUM H-3 by LSC
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?		✓	
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?		✓	
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
NCM 10-28585

First Level [signature] **Date** 9/09/2014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 422704

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?		✓	
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?		✓	
C. Other 1. Are all Nonconformances (NCM) included and noted?	✓		
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

10-28585 H3 400

dups, blank recount

Second Level Review: [signature] Date: 9/9/14

Lot No., Due Date: J4H120409,J4H140432; 09/12/2014
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 4227040; RUNAT UNat by KPA
SDG, Matrix: W06843; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	✓		
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Lisa Anderson Date 9/11/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 4227040

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?	✓		
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response:

Unat .144 ug/L

Second Level Review: Robert E. Mays Date: 9/12/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

September 16, 2014

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s):	4225075	Lab Sample Numbers or SDG:	W06843

Method/Test/Parameter: **Cr+6** ☒ **RL-WC-003(Aqueous)** ☐ **RL-WC-004(Solid)**

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration 1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient greater than 0.97?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within 10% of expected?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration 1. CCV analyzed at required frequency and all parameters within 10% of expected?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis 1. Were any samples with concentrations above the linear range diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples 1. All results for the preparation blank below limits?	✓			✓
2. LCS percent recovery within 85-115%	✓			✓
3. $PbCrO_4$ percent recovery within 75-125%?			✓	✓
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) RPD?			✓	✓
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-125% (solid)?	✓			✓
6. On MS failure, PDMS within 85-115%?			✓	✓
E. Other 1. Are all nonconformances included and noted?			✓	✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response or list NCM number:

Analyst I. Salifu Date 8-13-14 2nd Review H. Rahavi Date 8/20/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

September 16, 2014

Reliance Laboratory

Data Review Check List
Hexavalent Chromium

Batch Number(s):	4224083	Lab Sample Numbers or SDG:	W06843

Method/Test/Parameter: Cr+6 ☒ RL-WC-003(Aqueous) ☐ RL-WC-004(Solid)

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration 1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient greater than 0.97?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within 10% of expected?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration 1. CCV analyzed at required frequency and all parameters within 10% of expected?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis 1. Were any samples with concentrations above the linear range diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples 1. All results for the preparation blank below limits?	✓			✓
2. LCS percent recovery within 85-115%	✓			✓
3. $PbCrO_4$ percent recovery within 75-125%?			✓	✓
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) RPD?			✓	✓
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-125% (solid)?	✓			✓
6. On MS failure, PDMS within 85-115%?			✓	✓
E. Other 1. Are all nonconformances included and noted?			✓	✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response or list NCM number:

Analyst I. Salifu Date 8-13-14 2nd Review H. Rahavi Date 8-15-14

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S14-008-228
		Page 1 of 1

Collector	D.L. Floyd CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S14-008	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, AUGUST 2014	**Logbook No.**	HNF-N-506 666/52	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X7Y1	N	W	8/11/14	1257	1x500-mL G/P	KPA_UTOT: COMMON M4LQD	6 Months	HNO3 to pH <2
B2X7Y1	N	W	1	1	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

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September 16, 2014

J4H120409

J4H120409
SDG: WO6843
Due 9/10/14

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.L. Floyd CHPRC			AUG 11 2014 1325	F.M. Hall CHPRC			AUG 11 2014 1325
F.M. Hall CHPRC			AUG 11 2014 1450	J. Finck FEDEX			AUG 11 2014 1450

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 6/25/2014

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S14-008-229 Page 1 of 1

Collector D.L. Floyd CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 509-376-4650	
SAF No. S14-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300071ES20	
Project Title SURV, AUGUST 2014	**Logbook No.** HNF-N-506 66/51	**Ice Chest No.** N/A	
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.** N/A	
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X7Y8	N	W	8/11/14	0740	1x1-L P	906.0_TRITIUM_LSC: COMMON M4LQF	6 Months	None
B2X7Y8	N	W	1	1	1x500-mL G/P	KPA_UTOT: COMMON	6 Months	HNO3 to pH <2
B2X7Y8	N	W	1	1	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

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September 16, 2014

J4H120409

J4H120409
W0643

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.L. Floyd CHPRC			AUG 11 2014 1150	F.M. Hall CHPRC			AUG 11 2014 1150
F.M. Hall CHPRC			AUG 11 2014 1450	J. Freed			AUG 11 2014 1450

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 6/25/2014

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S14-008-230
		Page 1 of 1

Collector	D.L. Floyd CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S14-008	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, AUGUST 2014	**Logbook No.**	HNF-N-506 66151	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X7Y9	N	W	8/11/14	1039	1x1-L P	906.0_TRITIUM_LSC: COMMON M4LQG	6 Months	None
B2X7Y9	N	W	1	1	1x500-mL G/P	KPA_UTOT: COMMON	6 Months	HNO3 to pH <2
B2X7Y9	N	W	1	1	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J4H120409
W6843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.L. Floyd CHPRC			AUG 11 2014 1150	F.M. Hall CHPRC			AUG 11 2014 1150
F.M. Hall CHPRC			AUG 11 2014 1450	J.Fricke			AUG 11 2014 1450

Matrix *

S	= Soil		DS	=	Drum Solids
SE	= Sediment		DL	=	Drum Liquids
SO	= Solid		T	=	Tissue
SL	= Sludge		WI	=	Wipe
W	= Water		L	=	Liquid
O	= Oil		V	=	Vegetation
A	= Air		X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 6/25/2014

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S14-008-231
		Page 1 of 1

Collector	D.L. Floyd CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S14-008	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, AUGUST 2014	**Logbook No.**	HNF-N-506 66/51	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X811	N	W	8/11/14	1126	1x1-L P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B2X811	N	W	"	"	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B2X811	N	W	"	"	1x500-mL G/P	KPA_UTOT: COMMON	6 Months	HNO3 to pH <2
B2X811	N	W	"	"	1x500-mL P	TC99_ETVDSK_LSC: COMMON M4LQJ	6 Months	HCl to pH <2

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September 16, 2014

J4H120409
W06843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.L. Floyd CHPRC			8/14/14 1107 AUG 11 2014 1150	F.M. Hall CHPRC			AUG 11 2014 1150
F.M. Hall CHPRC			AUG 11 2014 1450	J. Fryer JHLR			AUG 11 2014 1450
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 6/25/2014

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S14-008-232
		Page 1 of 1

Collector	D.L. Floyd CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S14-008	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, AUGUST 2014	**Logbook No.**	HNF-N-506 66/51	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X812	N	W	8/11/14	1126	1x1-L P	906.0_TRITIUM_LSC: COMMON M4LQK	6 Months	None
B2X812	N	W	"	"	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B2X812	N	W	"	"	1x500-mL G/P	KPA_UTOT: COMMON	6 Months	HNO3 to pH <2
B2X812	N	W	"	"	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J4H120409
W06843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.L. Floyd CHPRC			AUG 11 2014 1150	F.M. Hall CHPRC			AUG 11 2014 1150
F.M. Hall CHPRC			AUG 11 2014 1450	J. Fries 2			AUG 11 2014 1450
			Date/Time				Date/Time
			Date/Time				Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

September 16, 2014

Date/Time Received: 8/11/14 1450 Container GM Screen Result: (Airlock) 40 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [ ]

Client: RGU SDG #: WO 6843 SAF #: 514-005 NA [ ]

Lot Number: J4H120409

Chain of Custody # 514-008-228; 229; 230; 231; 232
230 JF 8/12/14

Shipping Container ID or Air Bill Number : Hand de Civ. NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 1.6 °C ON ICE NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 5
7. Containers received: 10x500mlp; 6x1p
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____tape ____hazard labels ____custody seals ____appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) F I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
____are in good condition ____are leaking ____are broken
____have air bubbles (Only for samples requiring no head space) ____Other ____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] ____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 8-11-14

Client Notification needed? Yes [ ] No [ ] Date: ____
By: ____
Person contacted: ____

[ ] No action necessary; process as is

Project Manager _____ Date 8/12/14

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-061
		Page 1 of 1

Collector	S.W. King CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 68/82	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X605	N	W	8-12-14 AUG 12 2014	0901	1x500-mL aG	7196_CR6: COMMON M4LW7	24 Hours	Cool <=6C

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J4H120419

J4H120419
WO6843
Due 9/11/14

September 16, 2014

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
S.W. King CHPRC	S.W. King	S.W. King	AUG 12 2014 1139	MA White	MA White	MA White	AUG 12 2014 1139
MA White	MA White	MA White	8-12-14 1430	J.Fiest	J.Fiest	J.Fiest	8-12-14 1430
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solids		
SE = Sediment	DL = Drum Liquids		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wipe		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

September 16, 2014

Date/Time Received: 8-12-14 | 1430 Container GM Screen Result: (Airlock) 40 cpm Initials[F]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials[F]

Client: PGW SDG #: W06843 SAF #: I14-035 NA [ ]

Lot Number: J4H120419

Chain of Custody # I14-035-061

Shipping Container ID or Air Bill Number : hand delivered NA [RW]

Samples received inside shipping container/cooler/box Yes [B] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [B]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [B]
3. Cooler temperature: 1.3 °C Ice NA [ ]
4. Vermiculite/packing materials is NA [B] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [B] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1X500mlag
8. Sample holding times exceeded? NA [ ] Yes [ ] No [B]
9. Samples have: ____tape ____hazard labels [B] custody seals [B] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [P] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[B] are in good condition ____are leaking ____are broken
____have air bubbles (Only for samples requiring no head space) ____Other ____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [B]
14. Description of anomalies (include sample numbers): NA [B]
15. Sample Location, Sample Collector Listed on COC? * Yes [B] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: W/A RW 8/13/14

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: [signature] Date: 8-12-14

Client Notification needed? Yes [ ] No [RW] Date: ____
By: ____
Person contacted: ____

[RW] No action necessary; process as is

Project Manager [signature] Date 8/13/14

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-036-022
		Page 1 of 1

Collector	S.W. King CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-036	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2UP1, AUGUST 2014	**Logbook No.**	HNF-N-506 68182	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X6J3	N		AUG 1 2 2014	1057	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MHMNT	6 Months	None

J4H140432
WO6843

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J4H140432

September 16, 2014

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
S.W. King CHPRC		AUG 1 2 2014 1139	MA White	MA White	AUG 1 2 2014 1139
MA White	MA White	8-12-14 1430	J. Beck	Jack TACA	8-12-14 1430

Matrix *

S	= Soil	DS	=	Drum Solids
SE	= Sediment	DL	=	Drum Liquids
SO	= Solid	T	=	Tissue
SL	= Sludge	WI	=	Wipe
W	= Water	L	=	Liquid
O	= Oil	V	=	Vegetation
A	= Air	X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-036-031
		Page 1 of 1

Collector	S.W. King CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-036	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2UP1, AUGUST 2014	**Logbook No.**	HNF-N-506 68/82	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X6M9	N	W	AUG 12 2014	1235	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON M4mmV	6 Months	None

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WO6843

September 16, 2014

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
S.W. King CHPRC			AUG 12 2014 1315	MA White		Ma White	AUG 12 2014 1315
MA White		Ma White	8-12-14 1430	J. Fraser		JFR	8-12-14 1430

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-036-032
		Page 1 of 1

Collector	S.W. King CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-036	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2UP1, AUGUST 2014	**Logbook No.**	HNF-N-506 68/82	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X6N0	N		AUG 12 2014	1235	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON mumw	6 Months	None

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J4H140432
WO6843

September 16, 2014

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	S.W. King CHPRC		AUG 12 2014 1315		MA White	MA White	AUG 12 2014 1315
Relinquished By			Date/Time	Received By			Date/Time
MA White MA White			8-12-14 1430		J. Fiesel TALK		8-12-14 1430
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	=	Drum Solids	
SE	= Sediment	DL	=	Drum Liquids	
SO	= Solid	T	=	Tissue	
SL	= Sludge	WI	=	Wipe	
W	= Water	L	=	Liquid	
O	= Oil	V	=	Vegetation	
A	= Air	X	=	Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-036-030 Page 1 of 1

Collector	S.W. King CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-036	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2UP1, AUGUST 2014	**Logbook No.**	HNF-N-506 108 / 82	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X6M3	N	W	AUG 12 2014	1022	1x1-L P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B2X6M3	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B2X6M3	N	W	↓	↓	1x500-mL G/P	KPA_UTOT: COMMON	6 Months	HNO3 to pH <2
B2X6M3	N	W	AUG 12 2014	1022	1x500-mL P	TC99_ETVDSK_LSC: COMMON mymmx	6 Months	HCl to pH <2

J4H140432
WO6843

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
S.W. King CHPRC	S.W. King	AUG 12 2014 1139	Malcolm Malcolm	Malcolm Malcolm	AUG 12 2014 1139
Malcolm Malcolm	Malcolm Malcolm	8-12-14 1430	Jack Jack TAUR	Jack Jack TAUR	8-12-14 1430
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

September 16, 2014

Date/Time Received: 8-12-14 | 1430 Container GM Screen Result: (Airlock) 40 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [ ]

Client: PGW SDG #: WO68843 SAF #: I14-036 NA [ ]

Lot Number: J4H140432

Chain of Custody # I14-036-022;030;032;031

Shipping Container ID or Air Bill Number : hand deliv. NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 1.3 °C Ice NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 4
7. Containers received: 6x4oz; 2x500mg; 1x4g
   8.14.14
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____tape ____hazard labels ____custody seals ____appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) ____I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    ____are in good condition ____are leaking ____are broken
    ____have air bubbles (Only for samples requiring no head space) ____Other ____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] ____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: W/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 8.12.14

Client Notification needed? Yes [ ] No [ ] Date: ____
By: ____
Person contacted: ____

[ ] No action necessary; process as is

Project Manager _____ Date 8/15/14

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-055 Page 1 of 1

Collector	K.C. Patterson CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 64/93	**Ice Chest No.**	~~N/A~~ 8-13-14 WS-355
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X5X6	N	W	AUG 13 2014	0923	1x500-mL aG	7196_CR6: COMMON M4L79	24 Hours	Cool <=6C

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J4H130433

J4H130433
JF 8/13/14 ~~MAC~~ WO6843
Due 9/12/14

September 16, 2014

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
K.C. Patterson CHPRC			AUG 13 2014 1120	L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1120
L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1500			J. Fitzgerald TAMC	AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION.	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-062
		Page 1 of 1

Collector	J.R. Aguilar CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 66 / 53	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X610	N	W	8-13-14	0946	1x1-L P	906.0_TRITIUM_LSC: COMMON M4L8A	6 Months	None

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September 16, 2014

J4H130433
W06843

J4H130433

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar CHPRC			AUG 13 2014 1136	L.D. Wall CHPRC			AUG 13 2014 1136
L.D. Wall CHPRC			AUG 13 2014 1500	J. Fox			AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	=	Drum Solids
SE	= Sediment	DL	=	Drum Liquids
SO	= Solid	T	=	Tissue
SL	= Sludge	WI	=	Wipe
W	= Water	L	=	Liquid
O	= Oil	V	=	Vegetation
A	= Air	X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 6/25/2014

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-068
		Page 1 of 1

Collector K.C. Patterson CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 509-376-4650
SAF No. I14-035	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300071ES20
Project Title 100KR4, AUGUST 2014	**Logbook No.** HNF-N-506 64/93	**Ice Chest No.** ~~N/A~~ KC 8.13.14 GWS-147
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X632	N	W	AUG 13 2014	1045	1x1-L P	906.0_TRITIUM_LSC: COMMON M4L8C	6 Months	None
B2X632	N	W	↓	↓	2x1-L G/P	C14_LSC: COMMON	6 Months	None
B2X632	N	W	↓	↓	3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
B2X632	N	W	↓	↓	3x1-L G/P	SRTOT_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B2X632	N	W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J4H130433
W0643

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
K.C. Patterson CHPRC			AUG 13 2014 1120	L.D. Wall CHPRC			AUG 13 2014 1120
L.D. Wall CHPRC			AUG 13 2014 1500	J. Jack Jack TACK			AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil		DS	=	Drum Solids
SE	= Sediment		DL	=	Drum Liquids
SO	= Solid		T	=	Tissue
SL	= Sludge		WI	=	Wipe
W	= Water		L	=	Liquid
O	= Oil		V	=	Vegetation
A	= Air		X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

September 16, 2014

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I14-035-069**

Collector	K.C. Patterson CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 64/93	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X634	N	W	AUG 1 3 2014	1045	1x500-mL aG	7196_CR6: COMMON M4L8D	24 Hours	Cool <=6C

J4H130433
W06843

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
K.C. Patterson CHPRC [signature]	AUG 1 3 2014 1120	L.D. Wall CHPRC L.D. Wall	AUG 1 3 2014 1120
L.D. Wall CHPRC L.D. Wall	AUG 1 3 2014 1500	[signature] J. Fresz [signature]	AUG 1 3 2014 1500

Matrix *			
S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 6/25/2014 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-071
		Page 1 of 1

Collector	K.C. Patterson CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 64/93	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X641	N	W	AUG 13 2014	1214	1x500-mL aG	7196_CR6: COMMON M4L8E	24 Hours	Cool <=6C

J4H130433
WO 6843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
K.C. Patterson CHPRC			AUG 13 2014 1400	L.D. Wall CHPRC			AUG 13 2014 1400
L.D. Wall CHPRC			AUG 13 2014 1500		J. Frisk TALK		AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I14-035-076**

Page 1 of 1

Collector	K.C. Patterson CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 64/93	**Ice Chest No.**	~~N/A~~ KC 8.13.14 GWS-147
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X656	N	W	AUG 13 2014	0840	1x1-L P	906.0_TRITIUM_LSC: COMMON M4L8G	6 Months	None
B2X656	N	W	↓	↓	2x1-L G/P	C14_LSC: COMMON	6 Months	None
B2X656	N	W	↓	↓	3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
B2X656	N	W	↓	↓	3x1-L G/P	SRTOT_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B2X656	N	W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J4H130433
W06843

Relinquished By	Date/Time	Received By	Date/Time
K.C. Patterson CHPRC (signature)	AUG 13 2014 1120	L.D. Wall CHPRC (signature)	AUG 13 2014 1120
L.D. Wall CHPRC (signature)	AUG 13 2014 1500	J. Bock (signature) TALR	AUG 13 2014 1500

Matrix *

S = Soil	DS = Drum Solids
SE = Sediment	DL = Drum Liquids
SO = Solid	T = Tissue
SL = Sludge	WI = Wipe
W = Water	L = Liquid
O = Oil	V = Vegetation
A = Air	X = Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-077
		Page 1 of 1

Collector K.C. Patterson CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 509-376-4650
SAF No. I14-035	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300071ES20
Project Title 100KR4, AUGUST 2014	**Logbook No.** HNF-N-506 64/93	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X658	N	W	AUG 13 2014	0840	1x500-mL aG	7196_CR6: COMMON M4L8H	24 Hours	Cool <=6C

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J4H130433
W06843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
K.C. Patterson CHPRC			AUG 13 2014 1120	L.D. Wall CHPRC			AUG 13 2014 1120
L.D. Wall CHPRC			AUG 13 2014 1500		J. Fricker THAN		AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	=	Soil	DS	=	Drum Solids
SE	=	Sediment	DL	=	Drum Liquids
SO	=	Solid	T	=	Tissue
SL	=	Sludge	WI	=	Wipe
W	=	Water	L	=	Liquid
O	=	Oil	V	=	Vegetation
A	=	Air	X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-078
		Page 1 of 1

Collector	J.R. Aguilar CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 106 / 53	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X663	N	W	8-13-14	0823	2x1-L G/P	C14_LSC: COMMON M4L8J	6 Months	None

J4H130433
W06843

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.R. Aguilar CHPRC	AUG 13 2014 1130	L.D. Wall CHPRC	AUG 13 2014 1130
L.D. Wall CHPRC	AUG 13 2014 1500	J. Friesz STAFF	AUG 13 2014 1500

Matrix *

S	= Soil		DS	=	Drum Solids
SE	= Sediment		DL	=	Drum Liquids
SO	= Solid		T	=	Tissue
SL	= Sludge		WI	=	Wipe
W	= Water		L	=	Liquid
O	= Oil		V	=	Vegetation
A	= Air		X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-079 Page 1 of 1

Collector	J.R. Aguilar CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 606 / 53	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X665	N	W	8-13-14	0823	1x500-mL aG	7196_CR6: COMMON * M4L8L	24 Hours	Cool <=6C

J4H130433
W06843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar CHPRC			AUG 13 2014 1130	L.D. Wall	R.D. Wall		AUG 13 2014 1130
L.D. Wall CHPRC	R.D. Wall		AUG 13 2014 1500	CHPRC	J.Fries TALK		AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-081
		Page 1 of 1

Collector	K.C. Patterson CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 6494	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X670	N	W	AUG 13 2014	1313	1x500-mL aG	7196_CR6: COMMON M4L8 M4L8P JF 8/13/14	24 Hours	Cool <=6C

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September 16, 2014

J4H130433
W06843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
K.C. Patterson CHPRC			AUG 13 2014 1400	L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1400
L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1500		J. Frier THRC		AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-084
		Page 1 of 1

Collector	J.R. Aguilar CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 66 / 53	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X680	N	W	8-13-14	1113	1x1-L P	906.0_TRITIUM_LSC: COMMON M4L8Q	6 Months	None
B2X680	N	W	↓	↓	2x1-L G/P	C14_LSC: COMMON	6 Months	None
B2X680	N	W	↓	↓	3x1-L G/P	SRTOT_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B2X680	N	W	8-13-14	1113	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J4H130433
106843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar CHPRC			AUG 13 2014 1130	L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1130
L.D. Wall CHPRC	L.D. Wall		AUG 13 2014 1500	J. Lock	Jack Tack		AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil		DS	=	Drum Solids
SE	= Sediment		DL	=	Drum Liquids
SO	= Solid		T	=	Tissue
SL	= Sludge		WI	=	Wipe
W	= Water		L	=	Liquid
O	= Oil		V	=	Vegetation
A	= Air		X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I14-035-085
		Page 1 of 1

Collector	J.R. Aguilar CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I14-035	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, AUGUST 2014	**Logbook No.**	HNF-N-506 46 / 53	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit deliverables & invoices to Scott Fitzgerald, CHPRC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X682	N	W	8-13-14	1113	1x500-mL aG	7196_CR6: COMMON M4L8V	24 Hours	Cool <=6C

J4H130433
WO6843

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar CHPRC			AUG 13 2014 1130	L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1130
L.D. Wall CHPRC		L.D. Wall	AUG 13 2014 1500		J. Fiore TALX		AUG 13 2014 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

September 18, 2014

Sample Check-in List

Date/Time Received: 8/13/14 1500 Container GM Screen Result: (Airlock) 40 cpm Initials[F]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials[F]

Client: PGW SDG #: W06843 SAF #: I14-035 NA [ ]

Lot Number: J4H130433

Chain of Custody # I14-035-055; 062; 068; 069; 071; 076; 077; 078; 079; 081; 084; 085

Shipping Container ID or Air Bill Number : Hand Delivered NA [RW]

Samples received inside shipping container/cooler/box Yes [F] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [F]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [F]
3. Cooler temperature: 5.5 °C ON ICE NA [ ]
4. Vermiculite/packing materials is NA [F] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [F] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 12
7. Containers received: 7x500mlpy; 2x1p; 3x500mlp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [F]
9. Samples have: ____tape ____hazard labels F custody seals F appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) F I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
F are in good condition ____are leaking ____are broken
____have air bubbles (Only for samples requiring no head space) ____Other ____
12. Sample pH appropriate for analysis requested Yes [RW] No [ ] NA [ ]
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [F]
14. Description of anomalies (include sample numbers): NA [F] RW
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [F]
*For documentation only. No corrective action needed.
16. Additional Information: N/A RW

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 8/13/14

Client Notification needed? Yes [ ] No [RW] Date: ____
By: ____
Person contacted: ____

[RW] No action necessary; process as is

Project Manager _____ Date 8/14/14

LS-023 Rev. 17, 05/13

*** RE-ANALYSIS REQUEST ***

DUE DATE 9/12/14

CUSTOMER CH2MHill

ANALYSIS Alpha

MATRIX WATER

LOT NUMBER

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 4227046

NEW BATCH NUMBER 4245067

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)		
2) ALL		
3)		Dups at
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
LAB QC ID		Assigned with new batch.

RC-048 Rev 9, 9/10

9/6/2014 8:14:01 AM

Sample Preparation/Analysis

Balance Id:1120403183,B145441330

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AZ Gross Alpha Prp GPC001
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4245067 **WATER** **pCi/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: PeoplesK,RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **M4LQJ-3-AC**			52.10g,in	52.10g				22.80mg	240	22B	2017	9/6/14	
J4H120409-4-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
2 **M4LQJ-3-AH-X**			50.00g,in	50.00g				24.20mg	240	22C			
J4H120409-4-DUP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
3 **M4LQK-2-AC**			52.80g,in	52.80g				28.80mg	240	22D			
J4H120409-5-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 1.86E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
4 **M4T76-1-AA-B**			201.30g,in	201.30g				0.20mg	240	23A			
J4I020000-67-BLK													
09/04/2014 12:50 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
5 **M4T76-1-AC-C**			201.40g,in	201.40g	ASD5681 05/09/14,pd 04/04/05,r			0.60mg	240	23B			
J4I020000-67-LCS													
09/04/2014 12:50 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

75556

Sample Preparation/Analysis

AZ Gross Alpha Prp GPC001
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Balance Id:1120403183,B145441330

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: WattN,RichardsonB

AnalyDueDate: 09/12/2014

Batch: 4245067 **pCi/L**

SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: M4T76-BLK CommentsP-14-00272,S-14-00059P-14-00564,P-14-00645

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4LQJ3AC-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
M4T761AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
M4T761AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

M4LQJ3AC-SAMP Calc Info:

Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B	
M4T761AA-BLK:					
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B	
M4T761AC-LCS:					
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B	

September 16, 2014

ICOC Fraction Transfer/Status Report

ByDate: 9/8/2013, 9/13/2014, Batch: '4245067', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4245067						
AC		**Rev1C**	**RichardsonB**	9/4/2014 12:47:35 PM		
SC			McginnisT	IsBatched	9/2/2014 2:26:38 PM	ICOC_RADCALC v4.9.0
SC			RichardsonB	InPrep	9/4/2014 12:47:35 PM	RL-PRP-004 REVISION 2
SC			WattN	Prep2C	9/6/2014 8:23:18 AM	RL-GPC-001 REVISION 4
SC			BullJ	InCnt1	9/6/2014 9:53:02 AM	RL-CI-006 REVISION 5
SC			BullJ	CalcC	9/7/2014 4:39:40 PM	RL-CI-006 REVISION 5
SC			McginnisT	Rev1C	9/8/2014 11:09:39 AM	RL-DR-001 Rev 5
AC			**WattN**	9/6/2014 8:23:18 AM		
AC			**BullJ**	9/6/2014 9:53:02 AM		
AC			**BullJ**	9/7/2014 4:39:40 PM		
AC			**McginnisT**	9/8/2014 11:09:39		

AC: Accepting Entry; SC: Status Change

8/26/2014 7:27:29 AM

Sample Preparation/Analysis

Balance Id:1120482733,B145441330

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

BC Gross Beta Prp GPC001
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227047 **WATER** **pCi/L**

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **M4LQJ-1-AD**			87.20g,in	87.20g				87.70mg	200	25A	0954	8/28/14 JP	
J4H120409-4-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
2 **M4LQK-1-AD**			87.30g,in	87.30g				67.20mg	200	25J			
J4H120409-5-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 1.86E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
3 **M4LQK-1-AG-X**			90.80g,in	90.80g				67.40mg	200	25C			
J4H120409-5-DUP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 1.86E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
4 **M4MR4-1-AA-B**			201.70g,in	201.70g				1.20mg	200	25D			
J4H150000-47-BLK													
08/18/2014 16:19 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
5 **M4MR4-1-AC-C**			201.90g,in	201.90g	BESB4423 07/30/14,pd 10/01/01,r			4.40mg		25A	1326	8/28/14 JP	
J4H150000-47-LCS													
08/18/2014 16:20 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

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Sample Preparation/Analysis

Balance Id:1120482733,B145441330

BC Gross Beta Prp GPC001
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227047 **pCi/L**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: M4MR4-BLK "Comments P-14-00580",S-14-00059

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4LQJ1AD-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
M4MR41AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
M4MR41AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

M4LQJ1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR41AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR41AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

September 16, 2014

ICOC Fraction Transfer/Status Report

ByDate: 9/3/2013, 9/8/2014, Batch: '4227047', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227047						
AC		**Rev1C**	**PeoplesK**	8/18/2014 4:21:34 PM		
SC			PeoplesK	Prep1C	8/18/2014 4:21:34 PM	RL-PRP-004 REVISION 3
SC			wattn	IsBatched	8/25/2014 10:53:53 AM	ICOC_RADCALC v4.9.0
SC			WattN	Prep2C	8/26/2014 7:35:37 AM	RL-GPC-001 REVISION 4
SC			BullJ	InCnt1	8/26/2014 7:49:53 AM	RL-CI-006 REVISION 5
SC			BullJ	CalcC	8/28/2014 2:12:11 PM	RL-CI-006 REVISION 5
SC			McginnisT	Rev1C	9/3/2014 5:30:11 PM	RL-DR-001 Rev 5
AC			**WattN**	8/26/2014 7:35:37		
AC			**BullJ**	8/26/2014 7:49:53		
AC			**BullJ**	8/28/2014 2:12:11 PM		
AC			**McginnisT**	9/3/2014 5:30:11 PM		

AC: Accepting Entry; SC: Status Change

9/3/2014 12:53:10 PM

Sample Preparation/Analysis

Balance Id:1120482733,B425712682

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

CG Sr-Total Prp/Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech: 09/03/2014 08:16,BolesT

Batch: 4227048 WATER pCi/L PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 4225075 88EA, 4227041 5SS3, 4227042 FPS5, 4227044 ARS6, 4227045 AWTA, 4227048 CGTH,

Prep Tech: ,RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M4L8C-1-AE J4H130433-3-SAMP 08/13/2014 10:45			1000.40g,in AmtRec: 9XLP;1X500MLP	1000.40g #Containers: 10	SRTC2851 08/25/14 09/03/2014 08:16,s1			11.80mg	50 Scr:	31A Alpha: -2.91E-04 uCi/Sa	2244 Beta: 7.09E-04 uCi/Sa	9/8/14 MD	
2 M4L8G-1-AE J4H130433-6-SAMP 08/13/2014 08:40			1000.70g,in AmtRec: 9XLP;1X500MLP	1000.70g #Containers: 10	SRTC2852 08/25/14			11.70mg	C Scr:	31B 9/8/1400 Alpha: 7.29E-04 uCi/Sa	Beta: -3.04E-08 uCi/Sa		
3 M4L8Q-1-AD J4H130433-11-SAMP 08/13/2014 11:13			1006.50g,in AmtRec: 6XLP;1X500MLP	1006.50g #Containers: 7	SRTC2853 08/25/14			12.40mg		32A Scr: Alpha: 2.03E-04 uCi/Sa	Beta: -6.93E-05 uCi/Sa		
4 M4L8Q-1-AF-X J4H130433-11-DUP 08/13/2014 11:13			1008.00g,in AmtRec: 6XLP;1X500MLP	1008.00g #Containers: 7	SRTC2854 08/25/14			12.30mg		32B Scr: Alpha: 2.03E-04 uCi/Sa	Beta: -6.93E-05 uCi/Sa		
5 M4MR5-1-AA-B J4H150000-48-BLK 08/28/2014 10:21 pd			1005.30g,in AmtRec:	1005.30g #Containers: 1	SRTC2855 08/25/14			11.10mg		32C Scr: Alpha:	Beta:		
6 M4MR5-1-AC-C J4H150000-48-LCS 08/28/2014 10:22 pd			1000.70g,in AmtRec:	1000.70g #Containers: 1	STSF0541 08/14/14			11.40mg		32D Scr: Alpha:	Beta:		

September 16, 2014

Sample Preparation/Analysis

CG Sr-Total Prp/Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

Balance Id:1120482733,B425712682

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227048 **pCi/L**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: BolesT,RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: M4MR5-BLK CommentsS-14-00154,P-14-00575,P-14-00335,P-14-00646

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4L8C1AE-SAMP Constituent List:
Sr-90 RDL:2.00E+00 pCi/L LCL:70 UCL:130 RPD:20
M4MR51AA-BLK:
Sr-90 RDL:2.00E+00 pCi/L LCL: UCL: RPD:
M4MR51AC-LCS:
Sr-90 RDL:2 pCi/L LCL:70 UCL:130 RPD:20

M4L8C1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

September 16, 2014

ICOC Fraction Transfer/Status Report

ByDate: 9/9/2013, 9/14/2014, Batch: '4227048', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227048							
AC			**Rev1C**	**RichardsonB**	8/28/2014 10:17:06		
SC				RichardsonB	InPrep	8/28/2014 10:17:06 AM	RL-PRP-004 REVISION 2
SC				bolestr	IsBatched	9/3/2014 6:51:12 AM	ICOC_RADCALC v4.9.0
SC				BolesT	Sep1C	9/3/2014 1:02:39 PM	RL-GPC-010 REVISION 4
SC				BourneD	Sep1C	9/3/2014 1:03:23 PM	RL-GPC-010 REVISION 4
SC				BullJ	InCnt1	9/3/2014 1:06:41 PM	RL-CI-006 REVISION 5
SC				DawkinsO	CalcC	9/9/2014 2:18:49 AM	RL-CI-006 REVISION 5
SC				McginnisT	Rev1C	9/9/2014 2:14:20 PM	RL-DR-001 Rev 5
AC				**BolesT**	9/3/2014 1:02:39 PM		
AC				**BourneD**	9/3/2014 1:03:23 PM		
AC				**BullJ**	9/3/2014 1:06:41 PM		
AC				**DawkinsO**	9/9/2014 2:18:49 AM		
AC				**McginnisT**	9/9/2014 2:14:20 PM		

AC: Accepting Entry; SC: Status Change

9/5/2014 1:24:18 PM

Sample Preparation/Analysis

Balance Id:1120482733,,

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #: ____________

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227045 **WATER** **pCi/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 4225075 88EA, 4227041 5SS3, 4227042 FPS5, 4227044 ARS6, 4227045 AWTA, 4227048 CGTH,

Prep Tech: ,NeyensA

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M4L8C-1-AD J4H130433-3-SAMP 08/13/2014 10:45			2504.20g,in AmtRec: 9XLP;1X500MLP	2504.20g	#Containers: 10			200 GEC	200 min	G15	Scr: Alpha: -2.91E-04 uCi/Sa	2221	9/8/14 Beta: 7.09E-04 uCi/Sa
2 M4L8G-1-AD J4H130433-6-SAMP 08/13/2014 08:40			2511.60g,in AmtRec: 9XLP;1X500MLP	2511.60g	#Containers: 10				Scr:	G11	9/8/14 Alpha: 7.29E-04 uCi/Sa	2221	9/8/14 Beta: -3.04E-08 uCi/Sa
3 M4L8G-1-AG-X J4H130433-6-DUP 08/13/2014 08:40			AmtRec: 9XLP;1X500MLP		#Containers: 10	ISV		Recount	Scr:	G10	Alpha: 7.29E-04 uCi/Sa	0307	9/8/14 Beta: -3.04E-08 uCi/Sa
4 M4MR2-1-AA-B J4H150000-45-BLK 09/04/2014 12:44 pd			2544.80g,in AmtRec:	2544.80g	#Containers: 1				Scr:	G15	Alpha:	0309	Beta:
5 M4MR2-1-AC-C J4H150000-45-LCS 09/04/2014 12:46 pd			2501.80g,in AmtRec:	2501.80g	QCAG1982 07/25/14,pd 07/15/00,r #Containers: 1				Scr:	G12	Alpha:	0309	Beta:

September 16, 2014

TestAmerica Richland Wa. Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: **5**
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.69

Sample Preparation/Analysis

0, ,

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:,,

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227045 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4L8C1AD-SAMP Constituent List:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Sb-125	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:						

M4MR21AA-BLK:

M4MR21AC-LCS:

M4L8C1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

M4MR21AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

M4MR21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

ICOC Fraction Transfer Status Report

September 16, 2014

ByDate: 9/11/2013, 9/16/2014, Batch: '4227045', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227045							
AC			Rev1C	**NeyensA**	9/4/2014 12:38:22 PM		
SC				NeyensAR	IsBatched	9/4/2014 12:35:53 PM	ICOC_RADCALC v4.9.0
SC				NeyensA	InPrep	9/4/2014 12:38:22 PM	RL-GAM-001 REVISION 4
SC				BullJ	InCnt1	9/8/2014 1:42:19 PM	RL-CI-007 REVISION 3
SC				BullJ	CalcC	9/9/2014 8:51:12 AM	RL-CI-007 REVISION 3
SC				AntonsonL	Rev1C	9/11/2014 3:56:10 PM	RL-DR-001 Rev 5
AC				**BullJ**	9/8/2014 1:42:19 PM		
AC				**BullJ**	9/9/2014 8:51:12 AM		
AC				**AntonsonL**	9/11/2014 3:56:10 PM		

9/4/2014 11:40:05 AM

Sample Preparation/Analysis

Balance Id:1120482733,B425712682

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227049 WATER pCi/L PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 4227040 DHSS, 4227042 FPS5, 4227044 ARS6, 4227049 BNTB,

Prep Tech: ,NeyensA

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M4MMT-1-AA			3816.60g,in	3816.60g	ITA14325 08/12/14			34.40mg	100min	L5	0107	9/5/14	
J4H140432-1-SAMP													
08/12/2014 10:57	AmtRec: 2X4LP		#Containers: 2		Scr:	Alpha: 1.46E-03 uCi/Sa		Beta: -2.86E-05 uCi/Sa					
2 M4MMT-1-AC-X			3836.80g,in	3836.80g	ITA14326 08/12/14			34.60mg		L4	1307	9/6/14	
J4H140432-1-DUP													
08/12/2014 10:57	AmtRec: 2X4LP		#Containers: 2		Scr:	Alpha: 1.46E-03 uCi/Sa		Beta: -2.86E-05 uCi/Sa					
3 M4MMV-1-AA			3816.20g,in	3816.20g	ITA14327 08/12/14			33.60mg		L5			
J4H140432-2-SAMP													
08/12/2014 12:35	AmtRec: 2X4LP		#Containers: 2		Scr:	Alpha: 2.00E-03 uCi/Sa		Beta: 5.70E-05 uCi/Sa					
4 M4MMW-1-AA			3798.40g,in	3798.40g	ITA14320 08/12/14			34.60mg		L4	1524	9/6/14	
J4H140432-3-SAMP													
08/12/2014 12:35	AmtRec: 2X4LP		#Containers: 2		Scr:	Alpha: 1.05E-03 uCi/Sa		Beta: 8.26E-04 uCi/Sa					
5 M4MMX-1-AC			3804.40g,in	3804.40g	ITA14328 08/12/14			34.30mg		L5			
J4H140432-4-SAMP													
08/12/2014 10:22	AmtRec: 2X500MLP;1XLP;2X4LP		#Containers: 5		Scr:	Alpha: 2.31E-03 uCi/Sa		Beta: 1.78E-04 uCi/Sa					
6 M4MR6-1-AA-B			3570.70g,in	3570.70g	ITA14329 08/12/14			34.70mg		L4	1811	9/6/14	
J4H150000-49-BLK													
08/28/2014 07:46 pd	AmtRec:		#Containers: 1		Scr:	Alpha:		Beta:					
7 M4MR6-1-AC-C			3611.60g,in	3611.60g	ISD1737 08/18/14			35.70mg		L5			
J4H150000-49-LCS													
08/28/2014 07:48 pd	AmtRec:		#Containers: 1		Scr:	Alpha:		Beta:					

Sample Preparation/Analysis

Balance Id:,,

0, ,

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227049 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4MMT1AA-SAMP Constituent List:
I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD:
M4MR61AA-BLK:

M4MR61AC-LCS:

M4MMT1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR61AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR61AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

ICOC Fraction Transfer/Status Report

September 16, 2014

ByDate: 9/11/2013, 9/16/2014, Batch: '4227049', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227049							
AC			**Rev1C**	**NeyensA**	9/4/2014 8:03:45 AM		
SC				ReynaV	IsBatched	8/28/2014 7:23:59 AM	ICOC_RADCALC v4.9.0
SC				NeyensA	InPrep	9/4/2014 8:03:45 AM	RL-GAM-002 REVISION 4
SC				ReynaV	InPrep	9/4/2014 8:05:00 AM	RL-GAM-002 REVISION 4
SC				BullJ	InCnt1	9/4/2014 1:02:29 PM	RL-CI-007 REVISION 3
SC				BullJ	CalcC	9/7/2014 4:39:37 PM	RL-CI-007 REVISION 3
SC				AntonsonL	Rev1C	9/11/2014 3:41:31 PM	RL-DR-001 Rev 5
AC				**ReynaV**	9/4/2014 8:05:00 AM		
AC				**BullJ**	9/4/2014 1:02:29 PM		
AC				**BullJ**	9/7/2014 4:39:37 PM		
AC				**AntonsonL**	9/11/2014 3:41:31 PM		

AC: Accepting Entry; SC: Status Change

7 (4) 27

8/15/2014 2:32:49 PM

Sample Preparation/Analysis

Balance Id:,,

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227041 **WATER** **pCi/L** **PM, Quote: SS , 57671**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

1 M4L8C-1-AC

J4H130433-3-SAMP

08/13/2014 10:45 AmtRec: 9XLP;1X500MLP #Containers: 10 Scr: Alpha: Beta:

2 M4L8C-1-AG-X

J4H130433-3-DUP

08/13/2014 10:45 AmtRec: 9XLP;1X500MLP #Containers: 10 Scr: Alpha: Beta:

3 M4L8G-1-AC

J4H130433-6-SAMP

08/13/2014 08:40 AmtRec: 9XLP;1X500MLP #Containers: 10 Scr: Alpha: Beta:

4 M4L8J-1-AA

J4H130433-8-SAMP

08/13/2014 08:23 AmtRec: 2XLP #Containers: 2 Scr: Alpha: Beta:

5 M4L8Q-1-AC

J4H130433-11-SAMP

08/13/2014 11:13 AmtRec: 6XLP;1X500MLP #Containers: 7 Scr: Alpha: Beta:

6 M4MRQ-1-AA-B

J4H150000-41-BLK

08/15/2014 14:32 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

7 M4MRQ-1-AC-C

J4H150000-41-LCS

08/15/2014 14:32 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

8/15/2014 2:32:50 PM

Sample Preparation/Analysis

Balance Id:,,

0, ,

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227041 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 **M4MRQ-1-AD-BN**													
J4H150000-41-IBLK													
08/15/2014 14:32 pd			AmtRec:		#Containers: 1					Scr:	Alpha:		Beta:

ICOC Fraction Transfer/Status Report

September 16, 2014

ByDate: 9/12/2013, 9/17/2014, Batch: '4227041', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227041						
AC		**Rev1C**	**DawkinsO**	9/9/2014 9:29:49 PM		
SC			nortonp	IsBatched	9/9/2014 1:04:51 PM	ICOC_RADCALC v4.9.0
SC			DawkinsO	InCnt1	9/9/2014 9:29:49 PM	RL-CI-005 REVISION 3
SC			BullJ	CalcC	9/11/2014 10:14:19 AM	RL-CI-005 REVISION 3
SC			AntonsonL	Rev1C	9/12/2014 8:29:12 AM	RL-DR-001 Rev 5
AC			**BullJ**	9/11/2014 10:14:19		
AC			**AntonsonL**	9/12/2014 8:29:12		

AC: Accepting Entry; SC: Status Change

8/21/2014 1:31:14 PM

Sample Preparation/Analysis

Balance Id:1120482733,,

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

FP Tc-99 Prp/Sep LSC014
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227042 WATER pCi/L **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **M4LQD-1-AA**			130.90g,in	130.90g									
J4H120409-1-SAMP													
08/11/2014 12:57			AmtRec: 2X500MLP		#Containers: 2				Scr:	Alpha: -1.04E-05 uCi/Sa		Beta: 8.80E-05 uCi/Sa	
2 **M4LQF-1-AC**			127.30g,in	127.30g									
J4H120409-2-SAMP													
08/11/2014 07:40			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: -1.12E-04 uCi/Sa		Beta: 4.80E-05 uCi/Sa	
3 **M4LQG-1-AC**			125.90g,in	125.90g									
J4H120409-3-SAMP													
08/11/2014 10:39			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: 9.37E-04 uCi/Sa		Beta: 6.93E-05 uCi/Sa	
4 **M4LQG-1-AE-X**			125.20g,in	125.20g									
J4H120409-3-DUP													
08/11/2014 10:39			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: 9.37E-04 uCi/Sa		Beta: 6.93E-05 uCi/Sa	
5 **M4LQJ-1-AE**			126.50g,in	126.50g									
J4H120409-4-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
6 **M4LQJ-1-AG-S**			127.30g,in	127.30g	TCSG3515								
J4H120409-4-MS					08/14/14,pd								
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
7 **M4LQK-1-AE**			127.70g,in	127.70g									
J4H120409-5-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 1.86E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	

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September 16, 2014

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 09/12/2014

FP Tc-99 Prp/Sep LSC014
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Batch: 4227042 **WATER** **pCi/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None

Balance Id:1120482733,,
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 M4L8C-1-AF			124.90g,in	124.90g									
J4H130433-3-SAMP													
08/13/2014 10:45			AmtRec: 9XLP;1X500MLP		#Containers: 10				Scr:	Alpha: -2.91E-04 uCi/Sa		Beta: 7.09E-04 uCi/Sa	
9 M4L8G-1-AF			126.90g,in	126.90g									
J4H130433-6-SAMP													
08/13/2014 08:40			AmtRec: 9XLP;1X500MLP		#Containers: 10				Scr:	Alpha: 7.29E-04 uCi/Sa		Beta: -3.04E-08 uCi/Sa	
10 M4L8Q-1-AE			125.10g,in	125.10g									
J4H130433-11-SAMP													
08/13/2014 11:13			AmtRec: 6XLP;1X500MLP		#Containers: 7				Scr:	Alpha: 2.03E-04 uCi/Sa		Beta: -6.93E-05 uCi/Sa	
11 M4MMX-1-AD			125.00g,in	125.00g									
J4H140432-4-SAMP													
08/12/2014 10:22			AmtRec: 2X500MLP;1XLP;2X4LP		#Containers: 5				Scr:	Alpha: 2.31E-03 uCi/Sa		Beta: 1.78E-04 uCi/Sa	
12 M4MRW-1-AA-B			127.50g,in	127.50g									
J4H150000-42-BLK													
08/21/2014 13:30 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
13 M4MRW-1-AC-C			128.20g,in	128.20g	TCSE2923 08/14/14,pd 07/01/05,r								
J4H150000-42-LCS													
08/21/2014 13:30 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
14 M4MRW-1-AD-BN													
J4H150000-42-IBLK													
08/15/2014 14:32 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

Sample Preparation/Analysis

FP Tc-99 Prp/Sep LSC014
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:,,

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227042 **pCi/L**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 M4MRW-1-AE-BN													
J4H150000-42-IBLK													
08/15/2014 14:32 pd			AmtRec:		#Containers: 1						Scr:	Alpha:	Beta:

ICOC Fraction Transfer/Status Report

ByDate: 9/3/2013, 9/8/2014, Batch: '4227042', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227042							
AC			**Rev1C**	**PeoplesK**	8/21/2014 1:31:53 PM		
SC				PeoplesK	Prep1C	8/21/2014 1:31:53 PM	RL-PRP-004 REVISION 3
SC				carneyam	IsBatched	8/25/2014 1:24:03 PM	ICOC_RADCALC v4.9.0
SC				CarneyA	Sep2C	8/26/2014 12:25:42 PM	RL-LSC-014 REVISION 3
SC				BourneD	Sep2C	8/26/2014 12:26:33 PM	RL-LSC-014 REVISION 3
SC				BullJ	InCnt1	8/26/2014 1:13:33 PM	RL-CI-005 REVISION 3
SC				BullJ	CalcC	8/28/2014 2:12:33 PM	RL-CI-005 REVISION 3
SC				AntonsonL	Rev1C	9/3/2014 4:33:31 PM	RL-DR-001 Rev 5
AC				**CarneyA**	8/26/2014 12:25:42		
AC				**BourneD**	8/26/2014 12:26:33		
AC				**BullJ**	8/26/2014 1:13:33 PM		
AC				**BullJ**	8/28/2014 2:12:33 PM		
AC				**AntonsonL**	9/3/2014 4:33:31 PM		

12 (9)

8/15/2014 2:32:53 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 09/12/2014

Balance Id:,,
Pipet #: ____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 4227044 WATER pCi/L PM, Quote: SS , 57671
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M4LQF-1-AA J4H120409-2-SAMP 08/11/2014 07:40			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: -1.12E-04 uCi/Sa		Beta: 4.80E-05 uCi/Sa	
2 M4LQG-1-AA J4H120409-3-SAMP 08/11/2014 10:39			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: 9.37E-04 uCi/Sa		Beta: 6.93E-05 uCi/Sa	
3 M4LQJ-1-AA J4H120409-4-SAMP 08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
4 M4LQK-1-AA J4H120409-5-SAMP 08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 1.86E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
5 M4L8A-1-AA J4H130433-2-SAMP 08/13/2014 09:46			AmtRec: 1XLP		#Containers: 1				Scr:	Alpha:		Beta:	
6 M4L8C-1-AA J4H130433-3-SAMP 08/13/2014 10:45			AmtRec: 9XLP;1X500MLP		#Containers: 10				Scr:	Alpha:		Beta:	
7 M4L8G-1-AA J4H130433-6-SAMP 08/13/2014 08:40			AmtRec: 9XLP;1X500MLP		#Containers: 10				Scr:	Alpha:		Beta:	

TestAmerica Richland Wa.
Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 7
ICOC v5.1.4

September 16, 2014

8/15/2014 2:32:54 PM

Sample Preparation/Analysis

Balance Id:,,

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227044 **WATER** **pCi/L**

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

8 M4L8Q-1-AA

J4H130433-11-SAMP

08/13/2014 11:13 AmtRec: 6XLP;1X500MLP #Containers: 7 Scr: Alpha: Beta:

9 M4MMX-1-AA

J4H140432-4-SAMP

08/12/2014 10:22 AmtRec: 2X500MLP;1XLP;2X4LP #Containers: 5 Scr: Alpha: Beta:

10 M4MMX-1-AF-X

J4H140432-4-DUP

08/12/2014 10:22 AmtRec: 2X500MLP;1XLP;2X4LP #Containers: 5 Scr: Alpha: Beta:

11 M4MR1-1-AA-B

J4H150000-44-BLK

08/15/2014 14:32 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

12 M4MR1-1-AC-C

J4H150000-44-LCS

08/15/2014 14:32 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

13 M4MR1-1-AD-BN

J4H150000-44-IBLK

08/15/2014 14:32 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

14 M4MR1-1-AE-BN

J4H150000-44-IBLK

08/15/2014 14:32 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Sample Preparation/Analysis

Balance Id:,,

0, ,

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227044 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4LQF1AA-SAMP Constituent List:
H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20
M4MR11AA-BLK:

M4MR11AC-LCS:

M4MR11AD-IBLK:

M4MR11AE-IBLK:

M4LQF1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR11AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR11AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR11AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR11AE-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

ICOC Fraction Transfer/Status Report

ByDate: 9/9/2013, 9/14/2014, Batch: '4227044', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227044							
AC			Rev1C	WilkinsonA	8/18/2014 11:25:32		
SC				WilkinsonA	Sep1C	8/18/2014 11:25:32 AM	RL-LSC-005 REVISION 4
SC				BullJ	InCnt1	8/18/2014 11:49:01 AM	RL-CI-005 REVISION 3
SC				BullJ	CalcC	8/20/2014 2:10:50 PM	RL-CI-005 REVISION 3
SC				nagels	Rev1C	9/9/2014 11:47:33 AM	RL-DR-001 Rev 5
AC				**BullJ**	8/18/2014 11:49:01		
AC				**BullJ**	8/20/2014 2:10:50 PM		
AC				**nagels**	9/9/2014 11:47:33		

AC: Accepting Entry; SC: Status Change

*** RE-COUNT REQUEST ***

DUE DATE 9/12

CUSTOMER CH2M

ANALYSIS Tritium

MATRIX Water

LOT NUMBER 314H120409

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 4227044

NEW BATCH NUMBER 4248049

	LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)	MHMR12AD		Dups out
2)	MHMMX2AA		
3)	MHMMX2AF		Spurious counts on
4)	MHMR12AA		blank missed MDA
5)			
6)			
7)			
8)			
9)			
10)			
11)			
12)			
13)			
14)			
15)			
16)			
17)			
18)			
19)			
20)			

RC-126 Rev 6, 9/10

9/5/2014 5:23:41 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 09/12/2014

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Batch: 4248049 **WATER** **pCi/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None All Tests: 4227040 DHSS, 4227042 FPS5, 4227044 ARS6, 4227049 BNTB, 4248049 ARS6,

Balance Id:,,
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

1 M4MMX-2-AA

J4H140432-4-SAMP
08/12/2014 10:22 AmtRec: 2X500MLP;1XLP;2X4LP #Containers: 5 Scr: Alpha: 2.31E-03 uCi/Sa Beta: 1.78E-04 uCi/Sa

2 M4MMX-2-AF-X

J4H140432-4-DUP
08/12/2014 10:22 AmtRec: 2X500MLP;1XLP;2X4LP #Containers: 5 Scr: Alpha: 2.31E-03 uCi/Sa Beta: 1.78E-04 uCi/Sa

3 M4MR1-2-AA-B

J4H150000-44-BLK
09/05/2014 17:23 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

4 M4MR1-2-AD-B

J4H150000-44-BLK
09/05/2014 17:23 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

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September 16, 2014

Sample Preparation/Analysis

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id:,,

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 09/12/2014

Batch: 4248049 **pCi/L**
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: M4MR1-BLK "Comments P-14-00405",P-14-00221,H312B180,S-14-00169

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4MMX2AA-SAMP Constituent List:

M4MR12AA-BLK:

M4MR12AD-BLK:

M4MMX2AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR12AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MR12AD-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

September 16, 2014

ICOC Fraction Transfer/Status Report

ByDate: 9/9/2013, 9/14/2014, Batch: '4248049', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting		SOPs,Reagents,Comments
4248049						
AC		**Rev1C**	**BullJ**	9/9/2014 11:01:34		
SC			BullJ	CalcC	9/9/2014 11:01:34 AM	RL-CI-005 REVISION 3
SC			nagels	Rev1C	9/9/2014 11:51:44 AM	RL-DR-001 Rev 5
AC			**nagels**	9/9/2014 11:51:44		

8/19/2014 4:06:02 PM

Sample Preparation/Analysis

Balance Id:1120482733,,

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Laboratory

DH UNat_Laser Prp KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227040 **WATER** **ug/L** **PM, Quote: SS , 57671**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **M4LQD-1-AC**			25.40g,in	25.40g									
J4H120409-1-SAMP													
08/11/2014 12:57			AmtRec: 2X500MLP		#Containers: 2				Scr:	Alpha: -1.04E-05 uCi/Sa		Beta: 8.80E-05 uCi/Sa	
2 **M4LQD-1-AD-X**			28.00g,in	28.00g									
J4H120409-1-DUP													
08/11/2014 12:57			AmtRec: 2X500MLP		#Containers: 2				Scr:	Alpha: -1.04E-05 uCi/Sa		Beta: 8.80E-05 uCi/Sa	
3 **M4LQF-1-AD**			27.60g,in	27.60g									
J4H120409-2-SAMP													
08/11/2014 07:40			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: -1.12E-04 uCi/Sa		Beta: 4.80E-05 uCi/Sa	
4 **M4LQF-1-AE-S**			29.80g,in	29.80g	UNSM0203								
J4H120409-2-MS					08/07/14,pd								
08/11/2014 07:40			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: -1.12E-04 uCi/Sa		Beta: 4.80E-05 uCi/Sa	
5 **M4LQG-1-AD**			27.30g,in	27.30g									
J4H120409-3-SAMP													
08/11/2014 10:39			AmtRec: 2X500MLP;1XLP		#Containers: 3				Scr:	Alpha: 9.37E-04 uCi/Sa		Beta: 6.93E-05 uCi/Sa	
6 **M4LQJ-1-AF**			27.50g,in	27.50g									
J4H120409-4-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 6.02E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	
7 **M4LQK-1-AF**			30.00g,in	30.00g									
J4H120409-5-SAMP													
08/11/2014 11:26			AmtRec: 2X500MLP;2XLP		#Containers: 4				Scr:	Alpha: 1.86E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	

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September 16, 2014

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 09/12/2014

DH UNat_Laser Prp KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Batch: 4227040 **WATER** **ug/L**
SEQ Batch, Test: None

PM, Quote: SS , 57671

Balance Id:1120482733,,
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 **M4MMX-1-AE**			25.30g,in	25.30g									
J4H140432-4-SAMP													
08/12/2014 10:22			AmtRec: 2X500MLP;1XLP;2X4LP	#Containers: 5					Scr:	Alpha: 2.31E-03 uCi/Sa		Beta: 1.78E-04 uCi/Sa	
9 **M4MRM-1-AA-B**			26.50g,in	26.50g									
J4H150000-40-BLK													
08/19/2014 16:04 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	
10 **M4MRM-1-AC-C**			27.70g,in	27.70g	UNSM0204								
J4H150000-40-LCS					08/07/14,pd 02/01/86,r								
08/19/2014 16:05 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	
11 **M4MRM-1-AD-C**			25.70g,in	25.70g	UNSL0109								
J4H150000-40-LCS					08/07/14,pd 02/01/86,r								
08/19/2014 16:05 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	

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September 16, 2014

Sample Preparation/Analysis

DH UNat_Laser Prp KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120482733,,

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4227040 **ug/L**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: PeoplesK

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: M4MRM-BLK CommentsS-14-00059

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4LQD1AC-SAMP Constituent List:
Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:
M4LQF1AE-MS:

M4MRM1AA-BLK:
Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:
M4MRM1AC-LCS:
Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20
M4MRM1AD-LCS:
Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

M4LQD1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4LQF1AE-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MRM1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MRM1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4MRM1AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

ICOC Fraction Transfer Status Report

September 16, 2014

ByDate: 9/11/2013, 9/16/2014, Batch: '4227040', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
4227040							
AC			Rev1C	**PeoplesK**	8/19/2014 4:06:12 PM		
SC				PeoplesK	Prep1C	8/19/2014 4:06:12 PM	RL-PRP-004 REVISION 3
SC				carneyam	IsBatched	8/20/2014 7:08:37 AM	ICOC_RADCALC v4.9.0
SC				CarneyA	Prep2C	8/21/2014 10:43:33 AM	RL-KPA-001 REVISION 4
SC				BourneD	Prep2C	8/21/2014 10:43:56 AM	RL-KPA-001 REVISION 4
SC				Saliful	Cnt1C	9/9/2014 9:23:26 AM	RL-KPA-003 REVISION 4
SC				AntonsonL	Rev1C	9/11/2014 4:12:05 PM	RL-DR-001 Rev 5
AC				**CarneyA**	8/21/2014 10:43:33		
AC				**BourneD**	8/21/2014 10:43:56		
AC				**Saliful**	9/9/2014 9:23:26 AM		
AC				**AntonsonL**	9/11/2014 4:12:05 PM		

AC: Accepting Entry; SC: Status Change

8/13/2014 5:02:32 PM

Sample Preparation/Analysis

Balance Id:,,

384868, CH2M Hill Plateau Remediation Company , Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4225075 **WATER** **mg/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 5SS3, ARS6, AWTA, CGTH, FPS5, 4225075 88EA,

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

1 M4L79-1-AA

J4H130433-1-SAMP

08/13/2014 09:23 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

2 M4L79-1-AC-S

J4H130433-1-MS

08/13/2014 09:23 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

3 M4L79-1-AD-D

J4H130433-1-MSD

08/13/2014 09:23 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

4 M4L79-1-AE-X

J4H130433-1-DUP

08/13/2014 09:23 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

5 M4L8D-1-AA

J4H130433-4-SAMP

08/13/2014 10:45 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

6 M4L8E-1-AA

J4H130433-5-SAMP

08/13/2014 12:14 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

7 M4L8H-1-AA

J4H130433-7-SAMP

08/13/2014 08:40 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

8/13/2014 5:02:34 PM

Sample Preparation/Analysis

Balance Id:,,

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/12/2014

Sep1 DT/Tm Tech:

Batch: 4225075 WATER mg/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

8 M4L8L-1-AA

J4H130433-9-SAMP

08/13/2014 08:23 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

9 M4L8P-1-AA

J4H130433-10-SAMP

08/13/2014 13:13 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

10 M4L8V-1-AA

J4H130433-12-SAMP

08/13/2014 11:13 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

11 M4L9J-1-AA-B

J4H130000-75-BLK

08/13/2014 17:01 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

12 M4L9J-1-AC-C

J4H130000-75-LCS

08/13/2014 17:01 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Balance Id:,,
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 09/12/2014

Batch: 4225075 mg/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4L791AA-SAMP Constituent List:

M4L791AC-MS Constituent List:

M4L791AD-MSD:

M4L9J1AA-BLK:

M4L9J1AC-LCS:

M4L791AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4L791AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4L791AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4L9J1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4L9J1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

8/12/2014 4:04:47 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 09/11/2014

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Batch: 4224083 **WATER** **mg/L**
SEQ Batch, Test: None All Tests: 4224083 88EA,

PM, Quote: SS , 57671

Balance Id:,,
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

1 M4LW7-1-AA

J4H120419-1-SAMP

08/12/2014 09:01 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

2 M4LW7-1-AC-S

J4H120419-1-MS

08/12/2014 09:01 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

3 M4LW7-1-AD-D

J4H120419-1-MSD

08/12/2014 09:01 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

4 M4LW7-1-AE-X

J4H120419-1-DUP

08/12/2014 09:01 AmtRec: 1X500MLAG #Containers: 1 Scr: Alpha: Beta:

5 M4LXD-1-AA-B

J4H120000-83-BLK

08/12/2014 16:04 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

6 M4LXD-1-AC-C

J4H120000-83-LCS

08/12/2014 16:04 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Balance Id:,,

Pipet #: _____

AnalyDueDate: 09/11/2014

Sep1 DT/Tm Tech:

Batch: 4224083 **mg/L**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M4LW71AA-SAMP Constituent List:

M4LW71AC-MS Constituent List:

M4LW71AD-MSD:

M4LXD1AA-BLK:

M4LXD1AC-LCS:

M4LW71AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4LW71AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4LW71AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4LXD1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M4LXD1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B